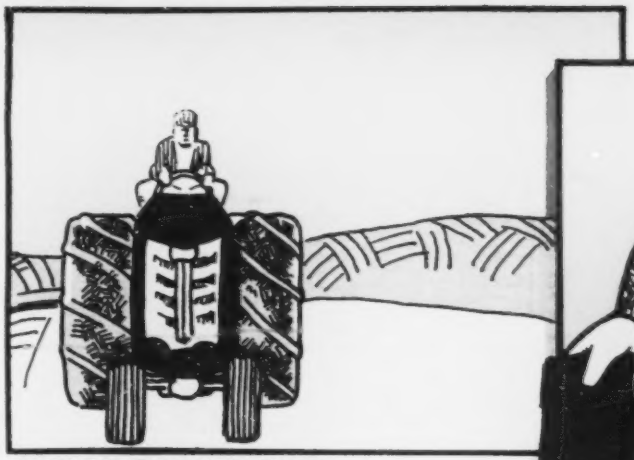
VIRGINIA ECONOMIC INDICATORS

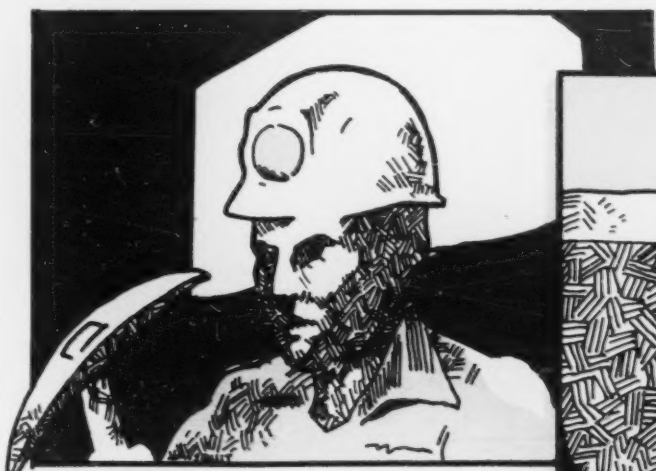
VOL. XVII NO. 3

3rd QUARTER 1985 DATA



AGRICULTURE

RETAIL SALES



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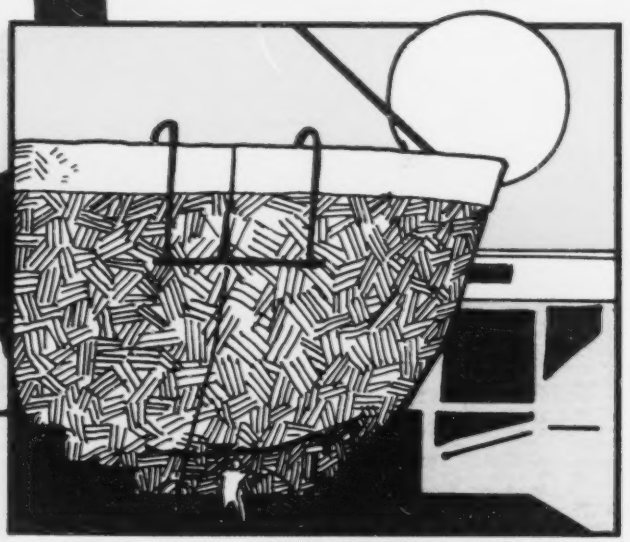

SHIPBUILDING

Virginia Employment Commission

FOREWORD

This publication is designed to depict the movement of Virginia's key economic indicators in graphic and tabular form with accompanying narrative analysis.

We welcome any comments, suggestions, or questions concerning Virginia Economic Indicators. Please contact Ralph C. Robinson, Director, Economic Information Services Division, P. O. Box 1358, Richmond, Virginia 23211, telephone (804) 786-7496, for additional information or explanation of the contents of this document.

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ECONOMIC OUTLOOK - U. S.

Third Quarter Statistics Exaggerate Economic Strength

The U. S. economy showed a 4.3 percent growth rate in GNP during the third quarter, significantly better than earlier estimates suggested. The healthy third quarter expansion should not be taken as a signal of renewed vigor in the economy in the months ahead, however. According to Chase Econometrics, there are several indications that the third quarter performance will not be repeated in the fourth quarter.

- Nearly two-thirds of the rise in third quarter GNP was accounted for by government purchases, including a 25 percent surge in defense payments.
- The increase in business inventories during the third quarter is not likely to continue because of the uncertain sales outlook and the return of auto inventories to more normal level after brisk late summer sales spurred by cheap financing.
- Real disposable personal income led by declines in farm and interest income dropped by 0.5 percent during the third quarter. By contrast, real disposable personal income grew in excess of 6 percent during 1984.
- Preliminary retail sales figures indicate sluggish growth in that area during the fourth quarter. The increase in consumer debt during the past two years and the extremely low savings rate (2.7 percent in the third quarter) indicate that consumers are already extended to their limits, and have used most of their reserve purchasing power.
- The decline in interest rates is not sufficient to rekindle strong economic growth. Interest rates are still high by historical standards, the prime rate exceeding the CPI by nearly seven percentage points.

Based on these trends, Chase Econometrics projects a 2.0 percent growth rate in the fourth quarter.

For 1986, Chase sees more of the same slow growth, averaging 2.5 percent for the entire year. Several early indicators support their forecast:

- Plant and equipment surveys indicate sluggish capital spending for the year-capacity utilization is now only slightly over 80 percent.
- Surveys show that business plans little inventory rebuilding next year in anticipation of continued sluggish sales.
- Consumer spending will continue to be stifled by sluggish income growth, a low savings rate, and already high household debt.
- Eroding business confidence indicates declines in hiring and investment plans.

However, these trends will eventually give way to renewed growth. In 1987, Chase sees:

- An improvement in the trade deficit due to further declines in the U. S. dollar.
- Additional stimulus to business provided by declining real interest rates.
- Improvement in the financial condition of consumers and additional spending in response to pent-up demand.

These factors should add up to a 3 percent real growth rate for 1987.

How U. S. and Virginia Compared
Third Quarter 1985

Percent Changed From Second Quarter 1985
(Seasonally Adjusted)

Employment and Unemployment	U. S.	Virginia
Nonagricultural Wage and Salary Employment	+0.6	-0.1
Manufacturing Employment	-0.5	-0.6
Total Unemployment Rate	-0.2	+0.6
Manufacturing Production Workers		
Average Weekly Hours	+0.5	-0.3
Aggregate Employee Hours	-0.1	-0.5
Average Hourly Earnings	+0.6	+0.9
Business		
Taxable Retail Sales	+8.5	+6.0

Virginia lagged the nation in most indicators during the third quarter. However, a very poor performance in July was balanced by record levels in nonag employment in September and retail sales in August.

HIGHLIGHTS
VIRGINIA ECONOMIC INDICATORS
Third Quarter 1985

- Virginia nonagricultural payrolls sets another new record in September of 2,427,000 jobs, seasonally adjusted.

- Employment in the nonmanufacturing industries in the State climbed to 2,010,100 in September.

- Construction employment hit an all time in Virginia of 157,100 in August at the height of the building season.

- Wholesale and retail trade employment, which is currently Virginia's largest employing sector, reached a record level of 543,800 in September, surpassing the previous high set in December 1984.

- Back to school shopping pushed taxable retail sales in Virginia to a record $3,216.6 million, seasonally adjusted, in August.

- Special incentive deals by auto manufacturers and the lowest auto finance rates in seven years caused new vehicle registrations to set a record of 42,529, seasonally adjusted, in September as Virginians purchased new cars at a rapid pace.

- Optimism over the economy caused a high of 1,396 new businesses, seasonally adjusted, to be incorporated in July.

- The fast growing service sector reached its highest employment level ever in August at 532,500 jobs.

- Electric power sales in kilowatt hours reached a new peak of 3,576.8 million, seasonally adjusted, in September.

- Virginia coal production at 33,375,000 short tons for the first three quarters of 1985 was 3.6 percent above the first three quarters of 1984. In the first nine months of 1985, Virginia was the only state east of the Mississippi to show an increase in coal production, and one of only eight of the 26 U. S. coal producing states experiencing increases. Virginia's 1,165,000 short ton increase so far in 1985 over the similiar 1984 period was exceeded by only two other states, Wyoming and North Dakota.

- Real Gross State Product grew a sharp 8.0 percent in Virginia from 1983 to 1984, higher than the 6.8 percent corresponding rise in U. S. Gross National Product, according to the University of Virginia's Tayloe Murphy Institute.

- Consumer price increases were still modest. The CPI for All Urban Consumers for the U. S. was 323.6 (1967 = 100) for the third quarter of 1985, only 0.8 percent above second quarter and 4.4 percent higher than during the Third Quarter 1984.

- The State Unemployment Trust Fund stood at $400.5 million at the end of September, $150.7 million above September 1984.

VIRGINIA ECONOMIC INDICATORS

VOL. XVII, NO. 3 THIRD QUARTER DATA

Indicators Portray Erratic Movement in the Third Quarter

The 15 series used to measure the performance of the Virginia economy showed erratic movement in the third quarter, depicting no clearcut trend. This indecisive showing followed a slightly negative trend in 1985's second quarter. Not one of the 15 series was either consecutively positive or consecutively negative for all three months of the third quarter. In spite of this somewhat muddled overall third quarter performance, five series did manage to break through and register all-time highs at some point during the period. New business incorporations set a record in July, and August saw a new high level for taxable retail sales. Nonagricultural employment, new vehicle registrations, and electrical power sales all set new records in September.

The indicators scored a poor performance in July with nine series down, five positive and one unchanged. Weaknesses in the employment and unemployment series because of competition from foreign imports also affected some production worker series. By August, a declining U. S. dollar made manufacturers more competitive and the employment, unemployment, and production worker indicators all responded accordingly. August bounced back strongly with 13 series up and only two slightly down. September's performance was more even, but still positive, with seven series up, six down, and two unchanged from August. Of the six series that moved downward in September, three were still above their July levels.

The six month moving average of the number of rising indicators (page 8) serves to highlight the third quarter's seesaw movement of the series with a return to near equilibrium by September. The moving average enhances analysis because it smooths out much of the irregularity present in many of the individual series.

Five Series Reach New Highs in Spite of Muddled Third Quarter Performance

The State's nonagricultural employment set a record in June at 2,412,500, seasonally adjusted, fell 0.8 percent in July, partially recovered in August, and then went on to set another all-time high of 2,427,000, seasonally adjusted, in September. Record job levels in trade, services, and construction were responsible for the nonfarm series ending the quarter on a high note. Seasonally adjusted factory employment, continuing the slide began in the first quarter, fell to 414,800, seasonally adjusted, in July, the lowest level in 19 months, because of a greater than usual number of summer plant closings caused in part by import competition. There was recovery in August to 417,800 before the factory employment indicator turned slightly negative again in September at 416,900.

The four indicators that track unemployment; the total jobless rate, average initial claims, the insured unemployment rate, and unemployment final payments; followed the seesaw movement of the two employment series. All four unemployment indicators were very negative in July, very positive in August, and ended the quarter in September on a mixed note, but slightly more down than up. Average weekly initial claims, however, which can be a harbinger of things to come, was positive in both August and September.

Levels of the production worker indicators were also influenced by the seesaw pattern of manufacturing. Average weekly hours at 39.7 in July were unchanged on a seasonally adjusted basis from June, and then edged up in August and September, ending the quarter at 40.2 hours. Average manhours fell to 12,466,000 in July, but then climbed to 12,785,200 by September. Average hourly earnings increased $.03 in July and $.11 in August before being reduced $.08 in September because of the hiring of large numbers of lower paid temporary workers associated with the processing of fall crops. The average weekly wage was up in July and August and then was practically unchanged for September.

The five business-related indicators mirrored the somewhat indecisive movement of other series in the third quarter. New business incorporations picked up in July to a record 1,393, but then trailed off in August and September. Building permits were down in July, then moved ahead in August and September, ending the quarter near May's relatively high level. New vehicle registrations were strong in July, lost a little ground in August, and then finished the quarter at the all-time record level of 42,529. Vehicle registrations, overall, were unusually strong in the third quarter because of special financing plans and other incentives offered by auto manufacturers to lure buyers into the market. With the lowest car financing rates in seven years, many people decided the third quarter was a good time to trade up to a new car. Electric power sales were off in July, and then were stronger the last two months of the quarter, setting a record in September. The surge in electrical usage in September was due to unusually hot weather for that time of year. Taxable retail sales were positive in July and August, reflecting back to school shopping (in fact, August set a record of $3,216.6 million), but sales were down slightly by September.

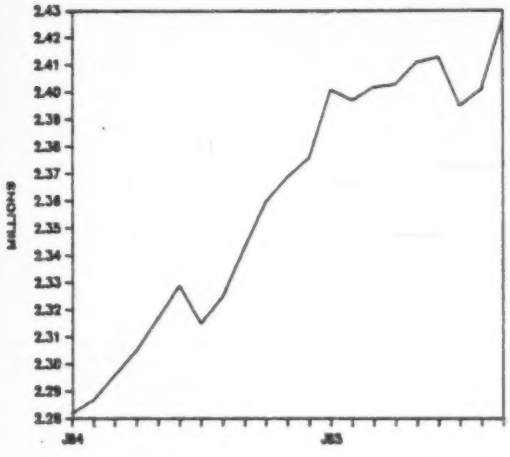
EMPLOYMENT AND UNEMPLOYMENT INDICATORS
January 1984 to September 1985

	Nonagricultural Wage & Salary Emp.* (Thousands)		Manufacturing Employment* (Thousands)		Total Unemployment Rate* (Percent)	
1984	Unadj.	Adj.	Unadj.	Adj.	Unadj.	Adj.
January	2,238.0	2,281.6	411.8	416.4	6.2	5.6
February	2,243.9	2,287.2	413.7	418.5	5.7	5.1
March	2,268.3	2,295.8	416.2	420.2	5.4	5.1
April	2,297.4	2,305.1	417.8	420.1	5.0	5.1
May	2,327.3	2,317.3	418.9	420.7	4.8	5.0
June	2,362.7	2,329.0	423.5	422.6	4.9	5.0
July	2,332.5	2,315.3	420.8	421.6	5.2	5.2
August	2,339.5	2,325.0	423.0	421.2	4.4	4.7
September	2,362.2	2,342.5	426.1	420.8	4.4	4.9
October	2,368.2	2,359.9	424.7	420.4	4.8	5.1
November	2,374.6	2,368.6	422.3	419.2	4.8	4.9
December	2,385.8	2,375.6	422.4	420.4	5.0	4.8
1985						
January	2,355.5	2,401.1	419.3	424.0	5.9	5.3
February	2,351.8	2,397.3	418.2	423.3	5.8	5.2
March	2,373.2	2,402.0	417.8	422.0	5.3	5.0
April	2,396.0	2,403.2	418.5	420.6	4.8	4.9
May	2,420.3	2,410.7	417.0	418.7	5.1	5.3
June	2,448.7	2,412.5	419.0	418.2	5.4	5.5
July	2,411.3	2,394.5	414.0	414.8	5.8	5.8
August	2,415.1	2,400.7	419.5	417.8	5.3	5.7
September	2,446.4	2,427.0	422.3	416.9	5.3	6.0

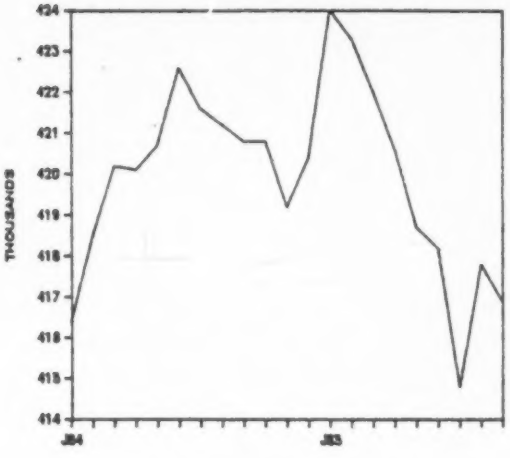
	Average Weekly Initial Claims (Number)		Avg. Wkly. Insured Unemployment Rate (Percent)		U. I. Final Payments (Number)	
1984	Unadj.	Adj.	Unadj.	Adj.	Unadj.	Adj.
January	12,255	6,919	1.9	1.3	2,375	2,494
February	6,459	6,406	1.7	1.3	2,368	2,533
March	5,584	6,019	1.5	1.2	2,814	2,273
April	5,033	5,872	1.2	1.2	3,016	2,296
May	4,098	5,470	1.0	1.1	3,031	2,751
June	5,580	6,454	1.1	1.3	1,987	1,734
July	5,956	6,536	1.0	1.2	2,134	2,112
August	4,108	5,966	0.9	1.1	1,972	2,095
September	4,213	6,170	0.8	1.1	1,434	1,806
October	6,956	7,994	1.0	1.3	1,601	2,077
November	8,771	8,580	1.3	1.4	1,545	1,823
December	12,900	7,787	1.2	1.1	1,575	1,675
1985						
January	12,108	6,829	2.2	1.5	2,613	2,753
February	8,996	8,925	1.8	1.3	2,052	2,195
March	6,752	7,252	1.7	1.4	2,374	1,907
April	6,767	7,924	1.2	1.2	3,117	2,367
May	5,475	7,369	1.1	1.3	2,680	2,436
June	5,869	6,824	1.0	1.2	2,019	1,756
July	8,538	9,414	1.2	1.4	2,571	2,561
August	5,249	7,663	1.0	1.2	1,845	1,952
September	4,344	6,398	0.9	1.2	1,630	2,066

*These series have been adjusted to First Quarter 1984 benchmarks.

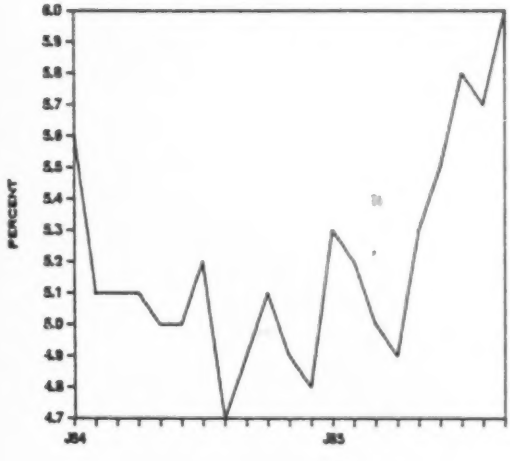
NONAG W & S EMPLOYMENT



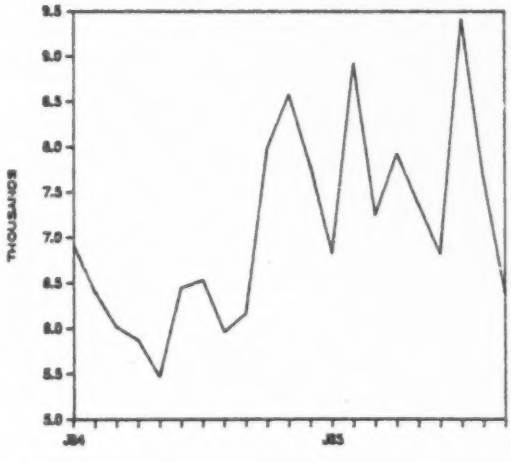
MANUFACTURING EMPLOYMENT



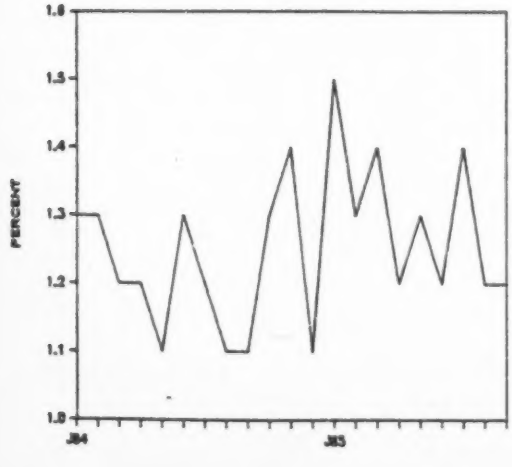
TOTAL UNEMPLOYMENT RATE



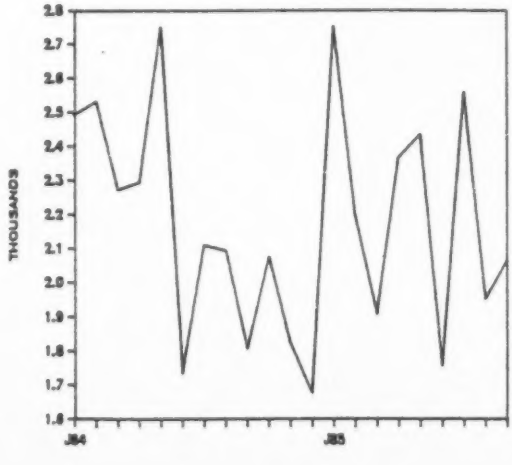
AVG. WEEKLY INIT. CLAIMS



INSURED UNEMPLOYMENT RATE



U. I. FINAL PAYMENTS



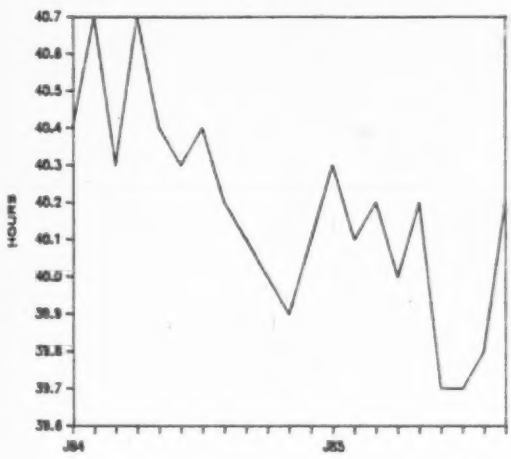
MANUFACTURING PRODUCTION WORKER INDICATORS
January 1984 to September 1985

	Average Weekly Hours* (Hours)		Average Manhours* (Thousands)	
1984	Unadj.	Adj.	Unadj.	Adj.
January	39.6	40.4	12,379.8	12,732.0
February	40.1	40.7	12,586.3	12,914.4
March	40.0	40.3	12,643.5	12,875.2
April	40.3	40.7	12,781.8	13,006.0
May	40.3	40.4	12,851.3	12,940.9
June	40.8	40.3	13,058.5	12,870.7
July	40.3	40.4	12,807.6	12,874.7
August	40.4	40.2	12,873.2	12,795.9
September	40.4	40.1	13,036.1	12,767.0
October	40.1	40.0	12,879.7	12,693.1
November	40.4	39.9	12,894.1	12,631.4
December	40.8	40.1	13,031.5	12,759.1
1985				
January	39.4	40.3	12,491.1	12,850.9
February	39.5	40.1	12,470.1	12,803.0
March	39.9	40.2	12,573.1	12,803.6
April	39.6	40.0	12,557.4	12,774.6
May	40.2	40.2	12,665.4	12,754.7
June	40.2	39.7	12,799.1	12,610.0
July	39.6	39.7	12,416.1	12,466.0
August	40.0	39.8	12,759.8	12,683.7
September	40.5	40.2	13,053.7	12,785.2

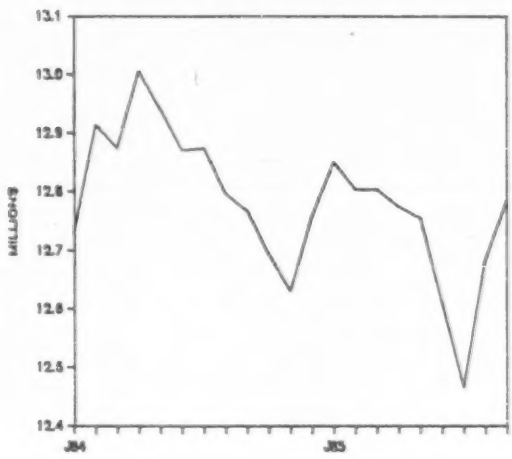
	Average Hourly Earnings* (Dollars)		Average Weekly Earnings* (Dollars)	
1984	Unadj.	Adj.	Unadj.	Adj.
January	8.04	7.95	318.38	322.02
February	7.97	7.97	319.60	324.84
March	8.03	8.02	321.20	323.69
April	8.02	8.02	323.21	325.71
May	8.03	8.05	323.61	325.13
June	8.09	8.13	330.07	327.70
July	8.14	8.17	328.04	330.35
August	8.16	8.21	329.66	330.35
September	8.17	8.19	330.07	327.98
October	8.17	8.20	327.62	327.39
November	8.23	8.18	332.49	326.40
December	8.31	8.28	339.05	331.70
1985				
January	8.37	8.28	329.78	333.79
February	8.45	8.46	333.78	339.55
March	8.45	8.44	337.16	339.88
April	8.53	8.54	337.79	340.51
May	8.48	8.51	340.90	342.27
June	8.51	8.54	342.10	339.38
July	8.54	8.57	338.18	340.56
August	8.62	8.68	344.80	345.49
September	8.58	8.60	347.49	345.42

*These series have been adjusted to First Quarter 1984 benchmarks.

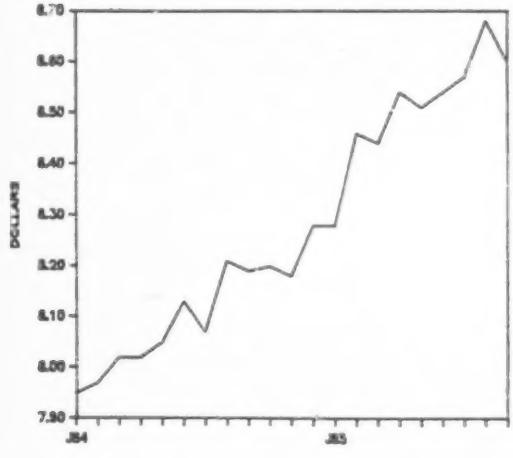
AVERAGE WEEKLY HOURS



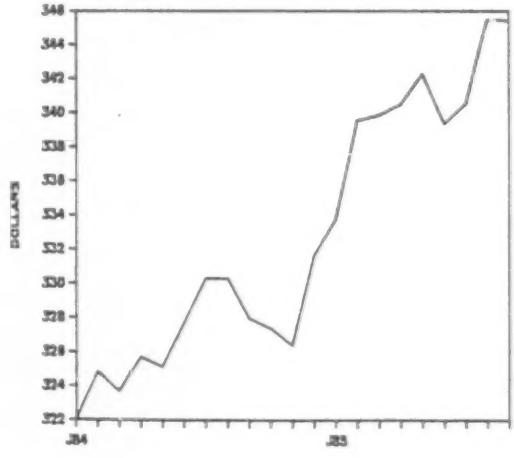
AVERAGE MANHOURS



AVERAGE HOURLY EARNINGS



AVERAGE WEEKLY EARNINGS

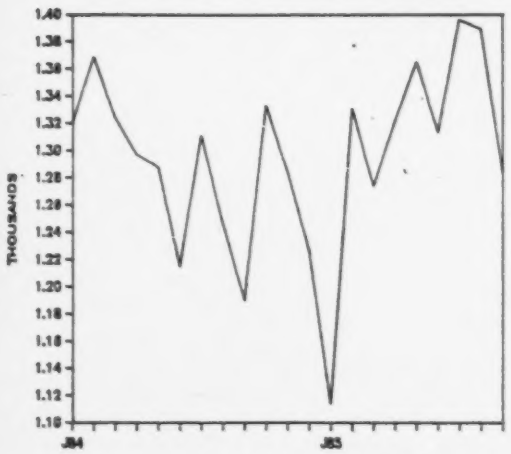


BUSINESS INDICATORS
January 1984 to September 1985

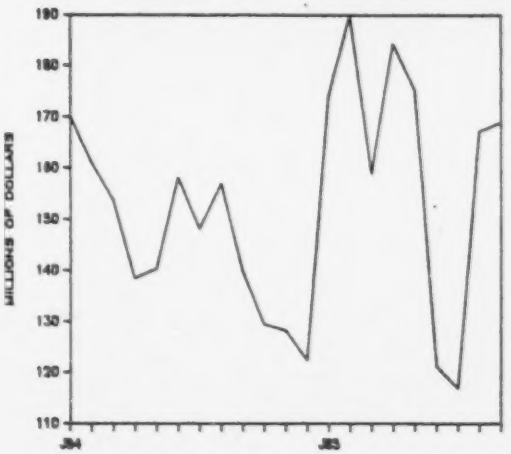
	New Business Incorporations (Number)		Valuation of Bldg. Permits ($ Millions)		New Vehicle Registrations (Number)	
1984	Unadj.	Adj.	Unadj.	Adj.	Unadj.	Adj.
January	1,373	1,320	136.3	169.9	29,459	32,794
February	1,329	1,369	117.4	161.1	28,700	32,245
March	1,476	1,324	189.1	153.8	34,898	29,971
April	1,417	1,297	153.4	138.5	35,032	31,041
May	1,300	1,288	135.2	140.4	36,395	33,517
June	1,246	1,215	193.7	158.1	37,953	32,229
July	1,243	1,311	169.1	148.2	42,134	38,367
August	1,290	1,246	155.3	157.0	35,989	33,437
September	1,128	1,190	137.6	139.9	30,085	30,812
October	1,302	1,333	128.9	129.5	31,383	34,333
November	1,152	1,284	141.1	128.3	27,628	31,985
December	1,148	1,226	91.1	122.5	23,205	31,768
1985						
January	1,154	1,114	139.1	174.1	33,530	37,464
February	1,294	1,331	139.8	190.0	29,072	32,665
March	1,424	1,274	195.6	159.0	38,164	32,843
April	1,447	1,322	204.4	184.3	39,165	34,752
May	1,380	1,365	166.0	175.3	42,505	39,211
June	1,348	1,313	149.5	121.2	40,170	33,927
July	1,315	1,396	133.7	116.9	41,215	37,571
August	1,445	1,389	165.0	167.3	37,532	34,816
September	1,212	1,284	166.0	169.0	41,423	42,529

	Electrical Power Sales (Mil. of KHW)		Taxable Retail Sales ($ Millions)	
1984	Unadj.	Adj.	Uadj.	Adj.
January	3,777.6	3,121.1	2,236.0	2,436.4
February	3,414.4	3,073.3	2,085.7	2,341.3
March	3,145.6	3,137.8	2,295.5	2,487.3
April	2,882.9	3,129.2	2,427.9	2,481.0
May	2,639.7	3,163.7	2,723.1	2,571.2
June	3,080.9	3,281.3	2,563.8	2,561.5
July	3,379.9	3,122.2	2,576.8	2,549.6
August	3,416.7	3,071.5	2,600.0	2,658.3
September	3,204.7	3,153.8	2,653.4	2,636.6
October	2,772.0	3,149.1	2,667.6	2,679.9
November	2,740.3	3,078.5	2,679.9	2,667.8
December	3,086.8	3,049.2	3,322.3	2,689.3
1985				
January	3,594.5	2,963.3	2,247.3	2,426.9
February	3,835.0	3,461.2	2,311.6	2,591.5
March	3,186.8	3,183.6	2,599.4	2,804.1
April	2,959.2	3,209.5	2,720.0	2,767.0
May	2,753.3	3,297.4	2,894.6	2,725.6
June	3,059.5	3,254.8	2,739.5	2,747.7
July	3,400.3	3,136.8	2,797.3	2,764.1
August	3,563.5	3,204.6	3,133.0	3,216.6
September	3,626.9	3,576.8	2,750.8	2,753.6

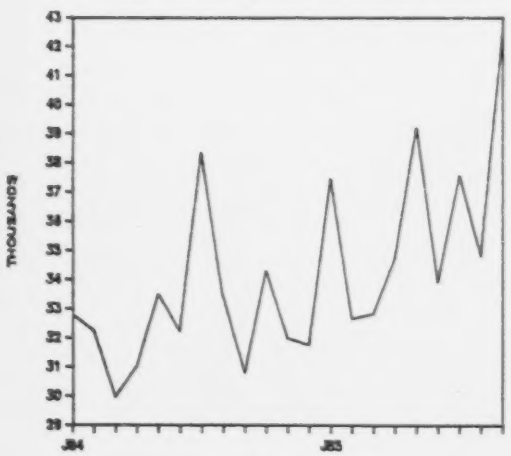
NEW BUSINESS INCORPORATIONS



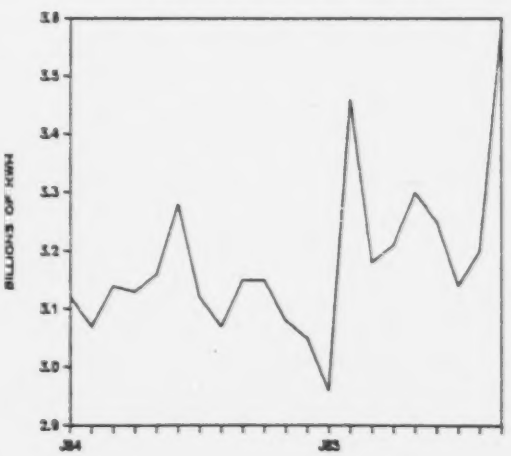
VALUATION OF BUILDING PERMITS



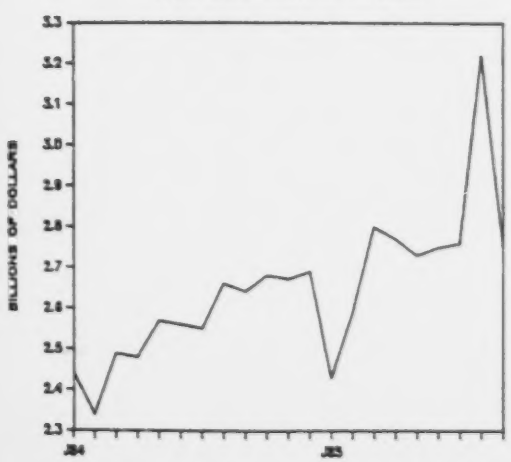
NEW VEHICLE REGISTRATIONS



ELECTRICAL POWER SALES



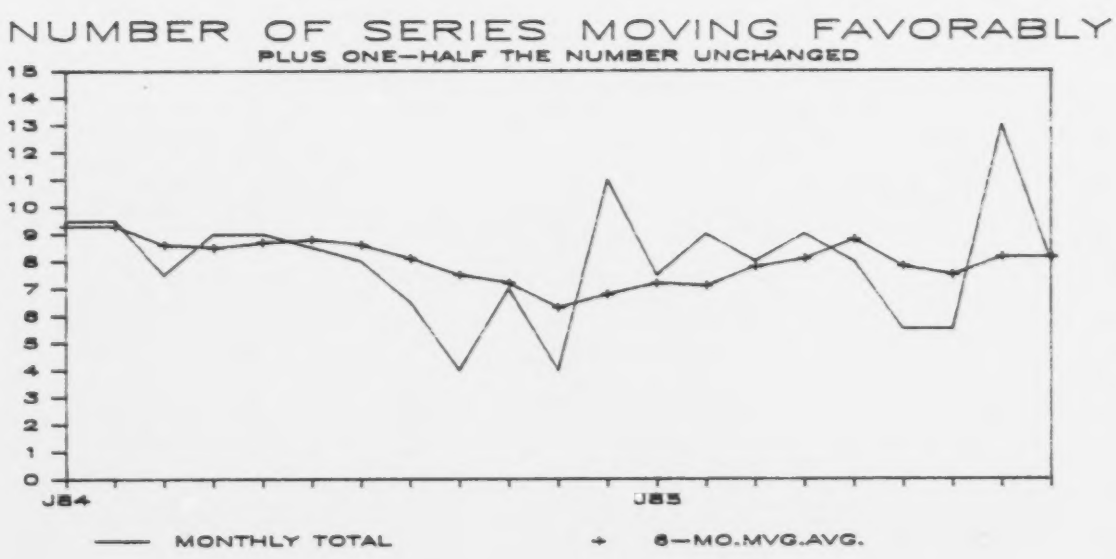
TAXABLE RETAIL SALES



DATA SUMMARY SEPTEMBER 1985 (SEASONALLY ADJUSTED DATA)	Sept. 1985	Aug. 1985	Sept. 1984	Percent & (Direction) of Change 1/ Aug. '85- Sept. '85	 Sept. '84- Sept. '85
EMPLOYMENT					
Nonagricultural Wage & Salary Employment (000)	2,427.0	2,400.7	2,342.5	+ 1.1 (+)	+ 3.6 (+)
Manufacturing Employment (000)	416.9	417.8	420.8	- 0.2 (-)	- 0.9 (-)
UNEMPLOYMENT					
Total Unemployment Rate (%)	6.0	5.7	4.9	xxx (-)	xxx (-)
Average Weekly Initial Claims	6,398	7,663	6,170	-16.5 (+)	+ 3.7 (-)
Average Weekly Insured Unemployment Rate (%)	1.2	1.2	1.1	xxx (0)	xxx (-)
Unemployment Insurance Final Payments	2,066	1,952	1,806	+ 5.8 (-)	+14.4 (-)
MANUFACTURING PRODUCTION WORKERS					
Average Weekly Hours	40.2	39.8	40.1	+ 1.0 (+)	+ 0.3 (+)
Average Manhours (000)	12,785.2	12,683.7	12,767.0	+ 0.8 (+)	+ 0.1 (+)
Average Hourly Earnings ($)	8.60	8.68	8.19	- 0.9 (-)	+ 5.0 (+)
Average Weekly Earnings ($)	345.42	345.49	327.98	0.0 (0)	+ 5.3 (+)
BUSINESS					
New Business Incorporations	1,284	1,389	1,190	- 7.6 (-)	+ 7.9 (+)
Valuation of Building Permits - 18 Cities ($M)	169.0	167.3	139.9	+ 1.0 (+)	+20.8 (+)
New Vehicle Registrations	42,529	34,816	30,812	+22.2 (+)	+38.0 (+)
Electrical Power Sales (M of KWH)	3,576.8	3,204.6	3,153.8	+11.6 (+)	+13.4 (+)
Taxable Retail Sales ($M)	2,753.6	3,216.6	2,636.6	-14.4 (-)	+ 4.4 (+)

1/ + = Favorable, - = Not Favorable, 0 = No Change (less than .05%).

SUMMARY



DATA SUMMARY AUGUST 1985 (SEASONALLY ADJUSTED DATA)	Aug. 1985	July 1985	Aug. 1984	Percent & (Direction) of Change 1/ July '85- Aug. '85	 Aug. '84- Aug. '85
EMPLOYMENT					
Nonagricultural Wage & Salary Employment (000)	2,400.7	2,394.5	2,325.0	+ 0.3 (+)	+ 3.3 (+)
Manufacturing Employment (000)	417.8	414.8	421.2	+ 0.7 (+)	- 0.8 (-)
UNEMPLOYMENT					
Total Unemployment Rate (%)	5.7	5.8	4.7	xxx (+)	xxx (-)
Average Weekly Initial Claims	7,663	9,414	5,966	-18.6 (+)	+28.4 (-)
Average Weekly Insured Unemployment Rate (%)	1.2	1.4	1.1	xxx (+)	xxx (-)
Unemployment Insurance Final Payments	1,952	2,561	2,095	-23.8 (+)	- 6.8 (+)
MANUFACTURING PRODUCTION WORKERS					
Average Weekly Hours	39.8	39.7	40.2	+ 0.3 (+)	- 1.0 (-)
Average Manhours (000)	12,683.7	12,466.0	12,795.9	+ 1.8 (+)	- 0.9 (-)
Average Hourly Earnings ($)	8.68	8.57	8.21	+ 1.3 (+)	+ 5.7 (+)
Average Weekly Earnings ($)	345.49	340.56	330.35	+ 1.5 (+)	+ 4.6 (+)
BUSINESS					
New Business Incorporations	1,389	1,396	1,246	- 0.5 (-)	+11.5 (+)
Valuation of Building Permits - 18 Cities ($M)	167.3	116.9	157.0	+43.1 (+)	+ 6.6 (+)
New Vehicle Registrations	34,816	37,571	33,437	- 7.3 (-)	+ 4.1 (+)
Electrical Power Sales (M of KWH)	3,204.6	3,136.8	3,071.5	+ 2.2 (+)	+ 4.3 (+)
Taxable Retail Sales ($M)	3,216.6	2,764.1	2,658.3	+16.4 (+)	+21.0 (+)

DATA SUMMARY JULY 1985 (SEASONALLY ADJUSTED DATA)	July 1985	June 1985	July 1984	Percent & (Direction) of Change 1/ June '85- July '85	 July '84- July '85
EMPLOYMENT					
Nonagricultural Wage & Salary Employment (000)	2,394.5	2,412.5	2,315.3	- 0.8 (-)	+ 3.4 (+)
Manufacturing Employment (000)	414.8	418.2	421.6	- 0.8 (-)	- 1.6 (-)
UNEMPLOYMENT					
Total Unemployment Rate (%)	5.8	5.5	5.2	xxx (-)	xxx (-)
Average Weekly Initial Claims	9,414	6,824	6,536	+38.0 (-)	+44.0 (-)
Average Weekly Insured Unemployment Rate (%)	1.4	1.2	1.2	xxx (-)	xxx (-)
Unemployment Insurance Final Payments	2,561	1,756	2,112	+45.8 (-)	+21.3 (-)
MANUFACTURING PRODUCTION WORKERS					
Average Weekly Hours	39.7	39.7	40.4	0.0 (0)	- 1.7 (-)
Average Manhours (000)	12,466.0	12,610.0	12,874.7	- 0.1 (-)	- 3.2 (-)
Average Hourly Earnings ($)	8.57	8.54	8.17	+ 0.4 (+)	+ 4.9 (+)
Average Weekly Earnings ($)	340.56	339.38	330.35	+ 0.4 (+)	+ 3.1 (+)
BUSINESS					
New Business Incorporations	1,396	1,313	1,311	+ 6.3 (+)	+ 6.5 (+)
Valuation of Building Permits - 18 Cities ($M)	116.9	121.2	148.2	- 0.4 (-)	-21.1 (-)
New Vehicle Registrations	37,571	33,927	38,367	+10.7 (+)	- 2.1 (-)
Electrical Power Sales (M of KWH)	3,136.8	3,254.8	3,122.2	- 3.6 (-)	+ 0.5 (+)
Taxable Retail Sales ($M)	2,764.1	2,747.7	2,549.6	+ 0.6 (+)	+ 8.4 (+)

1/ + = Favorable, - = Not Favorable, 0 = No Change (less than .05%).

DOLLAR DEPRECIATION STRATEGY AND OTHER ECONOMIC POLICY OPTIONS: THE PROSPECTS

In a major policy change for the Administration which ascribes to the free market economy, U. S. monetary authorities with finance ministers of five major European nations intervened into the currency market, selling dollars and buying major foreign currencies, knocking 5 percent off the value of the dollar in one day. The move to depreciate the dollar is part of President Reagan's strategy to derail the rising protectionist movement in Congress, which could menace the fabric of the world trading system. While denying a target level for the dollar's value, the Commerce Department estimates a 25 percent further decline is needed to make U. S. goods competitive in world markets by late 1986. To achieve that goal a 10 percent depreciation is needed by year end 1985. Although President Carter failed in the last major effort to appreciate the dollar via a $28 billion intervention, this current intervention has a better chance by being taken not against a rising but a falling dollar. From its February 25 high of 164.7, the dollar's trade weighted value stood at 132.3 on September 26, 1986. Even with expected help from the Federal Reserve via monetary ease to keep interest rates from rising, reversing capital flow, and revaluing the dollar upward and help from Congress in cutting the Federal deficit, a lift for the U. S. economy from a cheaper dollar will not be apparent until late in 1986. Heavy manufacturing, hurt most by imports, stands to gain the most from a lower dollar. A 25 percent dollar decline would knock $300 off the $2,000 Japanese car price advantage over U. S. cars. While consumers may pay 10 percent more for imported goods as a result of a 25 percent dollar decline, the impact would be only to raise inflation from the current 3.3 percent to about 5.0 percent.

CAUSES OF DOLLAR STRENGTH

The dollar's strength arises from the excess demand for foreign currencies which developed in the trade and services accounts being more than offset by an excess supply generated in the investment accounts. This excess supply from higher capital inflows (vs. outflows) could be blamed on declining U. S. investments abroad being far more significant than the rising foreign investments in the U. S. A closer examination reveals, however, that since 1980 both factors have contributed to the rise in the trade weighted dollar value index from 90 (1973 = 100) in 1980 to to its high of 164.7 on February 23, 1986. For the U. S. to be the world's largest importer of capital is a reversal of its postwar role up to 1982 - an inappropriate role for the world's largest economy - which needs to be reversed. High relative interest rates which pull in like magnets foreign funds and help domestic money at home are largely responsible. The Federal Reserve estimates that half of the dollar value rise since 1981 is explained by the differentials between real interest rates (market rates minus the inflation rate) on dollar assets and on assets denominated in other currencies such as short term European bonds. In particular, high Japanese savings rates and low inflation have kept their real interest rates lower than U. S. rates. Much of the other half may be explained by the rapid 1983-84 U. S. upturn, which with tax cut enhanced returns on business investment raised private credit demand, pulling up interest rates. As the dollar rose with the U. S. upturn, expectations (speculations) of a further rise fed the appreciation.

EFFECTS ON U. S. ECONOMY

The widening deficit on merchandise trade contributed to a growth recession (real GNP growing but with no fall in the unemployment rate) and to the creation of a "two tier" economy where a growing share of domestic demand is being siphoned off by imports. Combined with business efforts to hold down inventories in the face of slowing sales, industrial production growth slowed to below 2 percent annual rate and the capacity utilization rate was depressed near the 80 percent level. However, GNP would not likely have been much higher in the absence of rapid dollar appreciation. Since 1982-84, growth was in line with previous postwar upturns. In fact, with the 10.1 percent 1984 first quarter GNP growth, the absence of import demand might have triggered more rapid inflation, higher interest rates, and an abortion of the upturn.

The dollar appreciation cannot escape culpability for sharp declines in manufacturing sales and for fostering protectionism. The effects of dollar appreciation on 159 industries estimated by U. S. Commerce (1985) shows that while imports grew from $112.6 billion (in 1972 dollars), in 1982 second quarter to $172.7 billion, in 1985 second quarter, and imports rose from 7.6 percent to 10.3 percent of GNP, that 31 industries (19.5 percent of firms and 9 percent of sales) experienced markets where at least 50 percent of the 1983-84 increase came from abroad (market equals imports plus U. S. sales, foreign and domestic). In six industries, foundry equipment, non-rubber shoes, construction and paper machinery, plastic footwear, and fans - more than 100 percent of the market increase came from abroad and domestic production actually declined (See Table 1).

Table 1

Industries Where Imports Comprised at Least 50% of Market Growth During the Recovery (1982-1984)

Industry	Percentage Increase of Supply	Percentage Increase of Imports	Share of Growth in Supply Met By Imports	Percent Import Penetration* 1972	1982	1984
Foundry Equipment	1.0	108.3	866.7	NA	8.4	17.2
Footwear, ex. rubber	8.8	43.5	188.7	17.1	38.2	50.4
Construction Machinery	2.3	44.6	133.0	3.4	6.8	9.6
Rubber & Plastics Footwear	3.1	12.0	128.8	41.7	33.7	36.6
Paper Industries Machinery	2.3	16.2	106.4	12.6	14.9	16.9
Blowers and Fans	15.6	92.4	103.8	3.6	17.5	29.2
Air & Gas Compressors	2.8	40.5	98.8	6.0	6.7	9.2
Earthenware	33.4	44.8	92.5	51.3	69.0	74.9
Luggage & Personal Goods	39.7	89.2	87.1	20.7	38.7	52.4
Farm Mach. & Equip.	4.8	39.8	84.2	9.2	10.1	13.5
Costume Jewelry	20.5	86.2	78.1	10.4	18.5	28.6
Dolls	76.6	156.6	77.0	21.8	37.7	54.7
Textile Machinery	20.9	40.8	76.6	36.6	39.3	45.7
Radio & TV Sets	45.8	69.6	75.1	34.9	49.4	57.5
Women's Blouses	25.4	85.5	75.1	14.9	22.3	33.0
Women's Suits & Coats	14.5	62.6	74.4	7.3	17.3	24.5
Medicinals	13.1	44.4	71.2	22.0	21.1	26.9
Chinaware	19.8	33.6	71.1	41.0	41.8	46.7
Men's & Boy's Shirts & Ngtwr.	28.0	49.9	70.1	17.8	39.4	46.1
Primary Zinc	53.5	81.2	66.2	28.4	43.6	51.5
Elec. Resistors	17.6	57.2	64.7	NA	19.9	26.6
Transformers	3.3	22.8	59.2	3.5	8.6	10.3
Teleph. & Telegr. Equip.	15.5	177.8	57.6	2.1	5.0	12.1
Welding Apparatus	4.5	48.8	57.4	NA	5.3	7.5
Men's & Boy's Suits & Coats	15.8	44.8	56.8	7.1	20.1	25.1
Printing Trades Mach.	18.1	58.3	55.2	8.5	17.1	22.9
Musical Instruments	14.1	36.9	55.1	14.9	21.0	25.2
Men's & Boy's Outwear	19.9	49.9	53.9	8.7	21.4	26.8
Nitrogenous Fertilizers	18.8	78.4	53.8	4.3	12.9	19.4
Men's & Boy's Work Clothing	12.9	55.7	53.6	7.3	12.4	17.1
Pulpmills	24.7	43.5	50.7	30.4	28.8	33.1

*Import Penetration is imports divided by U.S. product shipments plus imports.
Source: U.S. Industrial Outlook, U.S. Department of Commerce estimates for 1984 data.

The enormous encrouchment of Organization for Economic Cooperation and Development (OECD) country imports on U. S. markets compared with the prior three postwar upturns can be seen on Table 2.

Compared to the prior upturn, West Germany upped its U. S. share to almost 18 percent (vs. 3.2 percent), the U. K. to 11 percent (vs. almost 5 percent) and Japan to almost 25 percent (vs. 7 percent).

While the import binge has forced cost controls and business replacement investment to boost productivity, dollar value depreciation, wage restraint, and especially interest rate stability are needed to help American products regain some lost market share.

Table 2

Percent of Nominal GNP Growth Attributable to Total Exports and Exports to U.S.

	Total Exports	Exports to U.S.	Growth in Exp. to U.S. as % of Growth in Total Exp.
West Germany			
Recovery 1	24.3	0.4	1.7
Recovery 2	42.3	2.2	5.1
Recovery 3	32.2	3.2	9.9
Current Recovery*	64.4	17.7	27.5
United Kingdom			
Recovery 1	32.5	0.5	1.5
Recovery 2	44.0	3.5	7.8
Recovery 3	46.0	4.6	9.9
Current Recovery*	51.9	11.0	21.2
Japan			
Recovery 1	12.6	3.2	25.3
Recovery 2	20.0	0.1	7.0
Recovery 3	16.6	7.0	43.1
Current Recovery*	36.8	24.6	66.8

*Through 1984.

ATTACKING THE CAUSE OF DOLLAR OVERVALUATION - INTEREST RATE REDUCTION

WHY INTEREST RATES HAVE BEEN HIGHER

Average money and capital market yields in the 1980's have exceeded those of the 1970's world-wide, especially in the U. S. and France, where 4 percentage points separated numerical rates in the two periods. By contrast, Japanese rates remained stable from 1970 to 1984 (See Table 3).

Four major causes of higher rates include:

- Federal Reserve switch to control money vs. credit and their anti-inflation stand forcing up rates.
- Financial market deregulation adding uncertainty premiums to rates.
- Incentives to business investment raised return on investment.
- Large and growing Federal deficits adding upward credit demand pressure to rates.

However, the major cause of higher rates has come as a result of a considerable tightening of the monetary base from late 1979 to the second half of 1982. From early 1983, the growing Federal deficit and the rebound of private credit demand have kept interest rates high even in the face of the Federal Reserve's reversion to monetary ease in late 1982. Heightened risk perception associated with greater interest rate volatility, growing budget deficits, and expectations of reviving inflationary pressures have also added to the level of U. S. interest rates. The return of the upward sloping yield curve (reversed from early 1980 to late 1982) reflects the demand for higher rates on long (vs. short) term bonds, which have fallen more slowly than short rates during the 1983-85 period.

Higher rates in Europe during 1980-84 stem partly from outflow of their capital to the U. S. creating a European funds shortage hence pushing up their rates and partly from their stringent monetary policies somewhat offsetting the weakening of their exchange rates vis-a-vis the dollar. Europe and Japan kept interest rates low enough to support recovery of domestic demand but still allow exchange rates to fall enough to spark exports and, in turn, stimulate their overall economies, most likely because of the absence of inflationary pressures. Germany allowed a 27 percent mark depreciation between 1983-85 and a 5.4 - 6.3 percent range on its short rates. Japan, during the same period, held its short rates in the 6.2 - 6.6 percent range while the yen slid about 18 percent vis-a-vis the dollar and France kept a 10.3 -12.4 percent range while its exchange rate fell 23 percent vis-a-vis the dollar. The credit ease and declining dollar in the U. S. has enabled Europe and Japan to lower interest rates to support their domestic demand. This, in turn, will stimulate their growth rates and in consonance with the cheaper dollars substantially increase U. S. exports.

Furthermore, the process of international arbitrage of financial assets tends to equalize the yields on money instruments of similiar risk classes. As speculators move away from the dollar, its more rapidly falling exchange rate could run away from the Federal Reserve. While the Federal Reserve can influence the dollar, the tradeoff on other targets such as money growth and interest rate levels is a delicate one. Just selling enough dollars world-wide would increase the monetary base via the plus in Federal Reserve foreign currencies holdings, increase the risk of inflation, and might even produce a dollar collapse. Managing a substantially lower dollar (down 20 - 25 percent further) with stable inflation and interest rates is challenging. Federal sales of treasury securities must offset dollar sales and foreign currency purchases. A real growth rebound and the associated rise in interest rates must not be sufficient to reaccelerate foreign capital inflows and subsequently the value of the dollar. Maintaining stable interest rates is the safest way to success and reducing the Federal deficit so that burden of stable interest rates does not fall fully on monetary policy is the key.

Table 3

Interest Rates in Major Financial Markets from 1970 to 1984

	Short-Term Rates		Long-Term Rates	
	Nominal	Real[1]	Nominal	Real[1]
United States				
80-84	12.14	4.60	11.75	4.30
75-79	7.30	−0.80	7.49	−0.60
70-74	7.14	1.00	6.25	0.20
Japan				
80-84	7.60	3.70	8.00	4.10
75-79	6.71	−0.60	7.80	0.50
70-74	7.83	−3.10	7.50	−3.40
Germany				
80-84	8.46	3.90	8.70	4.10
75-79	4.79	1.10	7.30	3.40
70-74	8.84	3.20	7.92	2.30
France				
80-84	13.25	2.10	14.77	3.60
75-79	8.69	−1.40	10.75	0.70
70-74	8.57	1.00	9.00	1.40
United Kingdom				
80-84	12.75	3.20	12.58	3.00
75-79	10.59	−5.00	13.41	−2.20
70-74	7.77	−1.80	10.48	0.90
Switzerland				
80-84	5.30	0.90	4.82	0.40
75-79	3.00	0.10	4.45	1.60
70-74	—	—	5.74	−1.40

[1]Real interest rates have been calculated by subtracting the rate of change of consumer prices from the short- and long-term nominal asset yields. More complicated methods, such as those based on survey data and various estimation techniques, have not been used because of their notorious unreliability in measuring inflation expectations.

Sources: OECD Financial Statistics (various issues).
OECD. Economic Outlook, June 1985.

SHORTAGE OF MIRACLES

A 12 - 15 percent dollar decline may have limited impact. First, the problems facing U. S. industry predate the rapid dollar rise. Second, the dollar rose disproportionarily fast against European currencies, therefore, its fall may retrace a similar path with its fall vs. the yen especially slow. Increases in import shares are not surrendered easily. But, a 12 - 15 percent dollar decline should only add 1 - 1.5 percent to the inflation rate giving domestic demand a good chance to grow faster and cut into import's market share. High tech industries would gain the most, but some declining industries might not gain at all. According to the BEA Division of Commerce major winners and losers under a 20 percent dollar decline are:

Winners (in billions of dollars in net sales)

- Fabricated metals: Up $3.07
- Electrical and non-electrical equipment: Up $2.75
- Chemicals: Up $2.24
- Non-electrical: Up $2.05
- Apparel: Up $1.38
- Textiles: Up $.83

Losers

- Petroleum: Down $2.16
- Food: Down $1.38
- Paper: Down $1.34
- Primary metals: Down $.99

The separate effects of price, income, and inflation effects on all 20 industries are shown on Table 4.

Table 4

Projected Total Effect of a 20% Depreciation of the U.S. Dollar on Manufacturing Industries, 1985.
(millions of dollars)

SIC Code & Industry Name	Basic Projection			Estimated Effect on Balance			Estimated Total Effect	Estimated New Balance
	Exports	Imports	Balance	Price-20%	Income-1%	Inflation-1%		
Durable Goods:								
24 Lumber	2399	5034	−2635	880	−155	−100	625	−2010
25 Furniture	575	2513	−1938	636	−121	−98	417	−1521
32 Stone, Clay, Glass	1688	3349	−1660	692	−230	−186	276	−1384
33 Primary Metals	3333	16867	−13534	127	−994	−122	−989	−14523
34 Fabricated Metals	6604	5938	666	3581	−276	−239	3066	3732
35 Nonelectrical Machinery	30283	23026	7257	3198	−759	−394	2045	9302
36 Electric & Electronic Equipment	19219	33480	−14260	5807	−2496	−557	2754	−11506
37 Transportation	32018	50974	−18956	5042	−3002	−1929	111	−18845
38 Instruments	8682	7112	1570	2507	−302	−331	1874	3444
Non-Durable Goods:								
20 Food	10344	10303	41	−511	−579	−291	−1381	−1340
21 Tobacco	1259	1075	184	448	−60	−177	211	395
22 Textiles	1142	2914	−1772	1043	−49	−164	830	−942
23 Apparel	874	13039	−12165	2295	−357	−561	1377	−10788
26 Paper	3763	5849	−2086	−1170	−168	0	−1338	−3424
27 Printing & Publishing	1483	1067	416	300	−7	−6	287	703
28 Chemicals	18804	11380	7424	3547	−990	−321	2236	9660
29 Petroleum	8077	20676	−12599	−1179	−732	−246	−2157	−14756
30 Rubber	2605	3932	−1327	−265	−168	−47	−480	−1807
31 Leather	423	7144	−6721	1416	−9	−229	1178	−5543
39 Misc.	1786	9080	−7294	−1816	0	0	−1816	−9110
TOTAL:	155361	234752	−79391	26576	−11453	−5998	9125	−70266

SOURCE: Office of Business Analysis, Department of Commerce.

In addition, the impact of 20 percent dollar depreciation for total U. S. manufacturing employment (industry detail not available) was projected using the Chase Econometric model for the same period, 1985. Manufacturing employment would be 19.313 million without dollar depreciation and 19.310 with depreciation or 3,000 less employed despite the $9,125 billion increase in manufacturing sales reported by BEA under dollar depreciation. However, by 1986 year end, under dollar depreciation manufacturing employment would be 19.248 million compared with 19.219 without depreciation, a gain of 29,000 jobs. By year end 1987, 19.526 million manufacturing jobs would exist vs. 19.321 without depreciation, a gain of 205,000 jobs. Table 5 shows the quarterly Chase projections for manufacturing employment for 1985 - 4th quarter through 1987 - 4th quarter for the dollar depreciation model (Col. 2), the standard model without depreciation (Col. 3), the absolute employment difference (Col. 4), and the percent difference (Col. 5).

Table 5: Manufacturing Employment
(In Millions)

Year/Qtr.	Dollar Deprec. Forecast	Standard Forecast	Actual Difference-Employment	Percent Difference
1985 / 4	19.310	19.313	-0.002	-0.011
1986 / 1	19.274	19.279	-0.005	-0.026
1986 / 2	19.278	19.279	-0.001	-0.005
1986 / 3	19.265	19.255	0.010	0.054
1986 / 4	19.248	19.219	0.029	0.153
1987 / 1	19.286	19.231	0.056	0.289
1987 / 2	19.350	19.261	0.090	0.466
1987 / 3	19.435	19.294	0.141	0.729
1987 / 4	19.526	19.321	0.205	1.062

In the next issue, the same comparison of dollar depreciation on employment will be made for Virginia which could not be done in this issue due to reporting data lags in the Virginia Model Data Base.

Conway Lackman

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Dennison, E., Accounting for Slower Growth, U. S. in the 1970's, Brooking's Institution, 1979.

Lipsey, R. E. & E. B. Keavis, "Competitive Position of U. S. Manufacturing Firms," NBER, Paper #1557, 1985.

Ivanovitch, M. S., "Recent Interest Rate Developments in Major World Financial Markets, "Business Economics, XX 4, October, 1985.

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HISTORICAL SUMMARY

Performance of Indicators Over the Business Cycle

GENERAL INFORMATION

For those interested in studying the business cycle in Virginia, this publication includes several of the economic time series for which data is readily available on a monthly basis. From time to time, new series will be added and, if necessary, others presently included will be discontinued.

BUSINESS CYCLE TURNING POINTS

The shaded spaces on the charts represent the 1973-75, 1980, and 1981-82 recessions as designated by the National Bureau of Economic Research (NBER). The beginning of a recession is defined as the month when aggregate economic activity in the U. S. reaches a cyclical high, from which it begins to turn down, and the end as the month when it reaches a cyclical low, from which it begins to turn up. According to NBER, the 1973-75 recession began in November 1973 and ended in March 1975, the 1980 recession began in January 1980 and ended in July 1980, and the 1981-82 recession began in July 1981 and ended in November 1982.

SEASONAL ADJUSTMENT

To correlate changes in a time series and changes in the business cycle it is desirable

SEASONAL ADJUSTMENT (continued)

to eliminate, insofar as possible, the effect of irrelevant factors from the data comprising the series. All series currently published in Indicators have been adjusted to minimize regular seasonal fluctuations in the data in order to show only activity related to the business cycle.

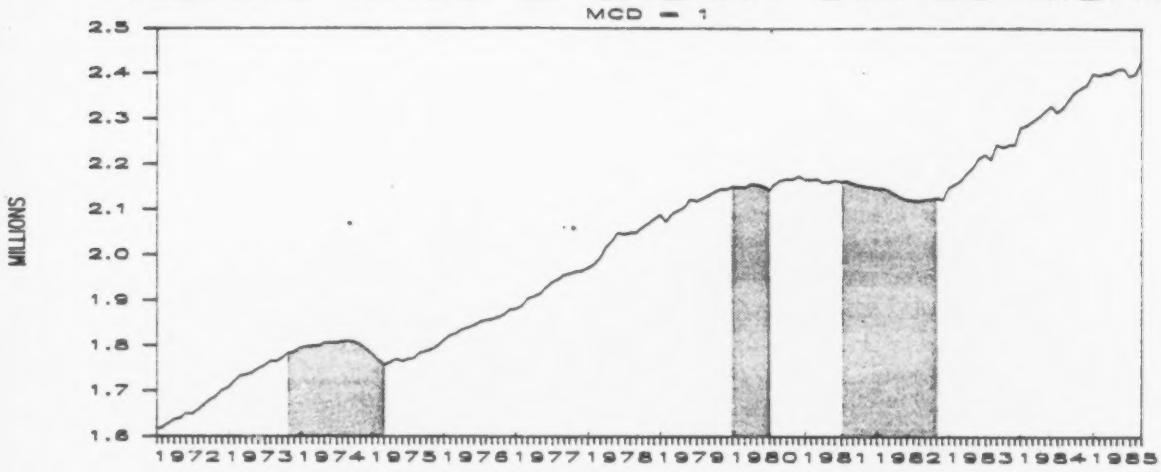
MONTHS FOR CYCLICAL DOMINANCE (MCD)

After seasonal adjustment there often remains a significant degree of purely random change, the effect of which can be minimized with a moving average equal in length to the MCD of the series. The MCD is an estimate of the length of the moving average which will reveal the cyclical pattern among the welter of random fluctuations in the data--the greater the MCD the more random and less cyclically significant are monthly changes in the series. Where noted, charts of historical data in this publication represent seasonally adjusted figures which have been averaged according to the MCD of each series.

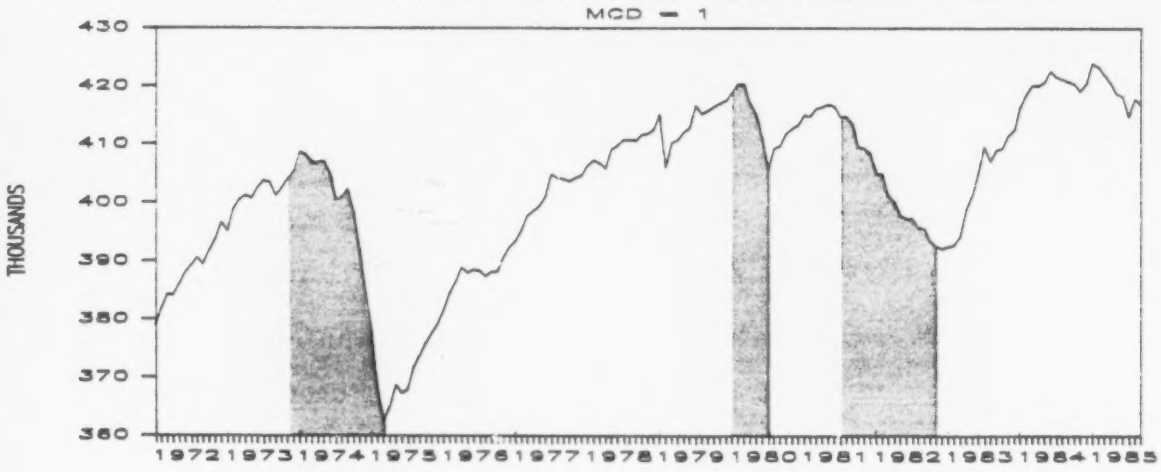
DATA SOURCES

Nonagricultural Wage and Salary Employment	Virginia Employment Commission (VEC)
Manufacturing Employment	VEC
Total Unemployment Rate	VEC
Average Weekly Initial Claims	VEC
Insured Unemployment Rate	VEC
Unemployment Insurance Final Payments	VEC
Average Manhours	VEC
Average Hourly Earnings	VEC
Average Weekly Earnings	VEC
Average Workweek	VEC
New Business Incorporations	Virginia State Corporation Commission
Valuation of Building Permits - 18 Cities	Local Building Inspectors
New Vehicle Registrations	Virginia State Division of Motor Vehicles
Electrical Power Sales	VEPCO, Appalachian Power Co., Delmarva Electric Co., Tennessee Power Company
Taxable Retail Sales	Virginia State Department of Taxation
Taxable Retail Sales/CPI	Virginia State Department of Taxation

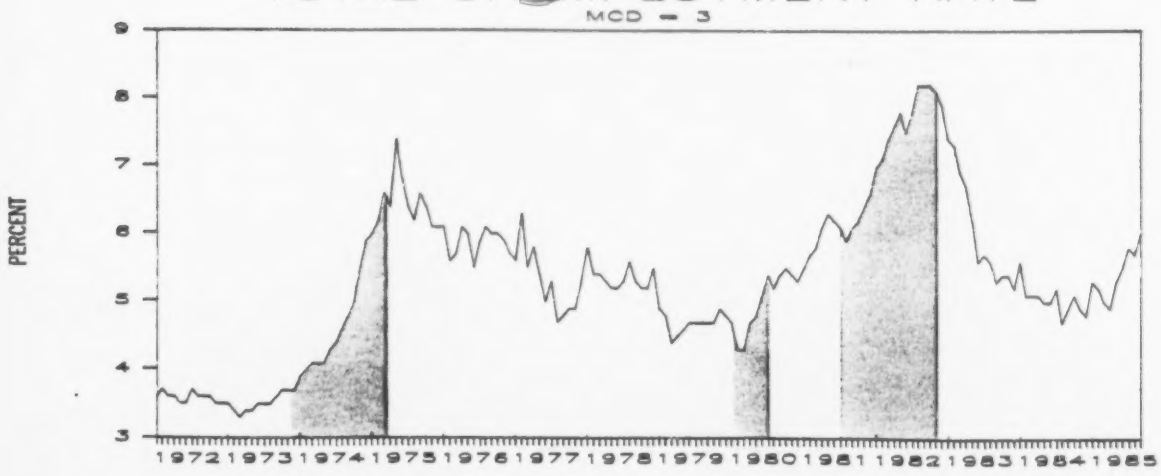
NONAG WAGE & SALARY EMPLOYMENT



MANUFACTURING EMPLOYMENT

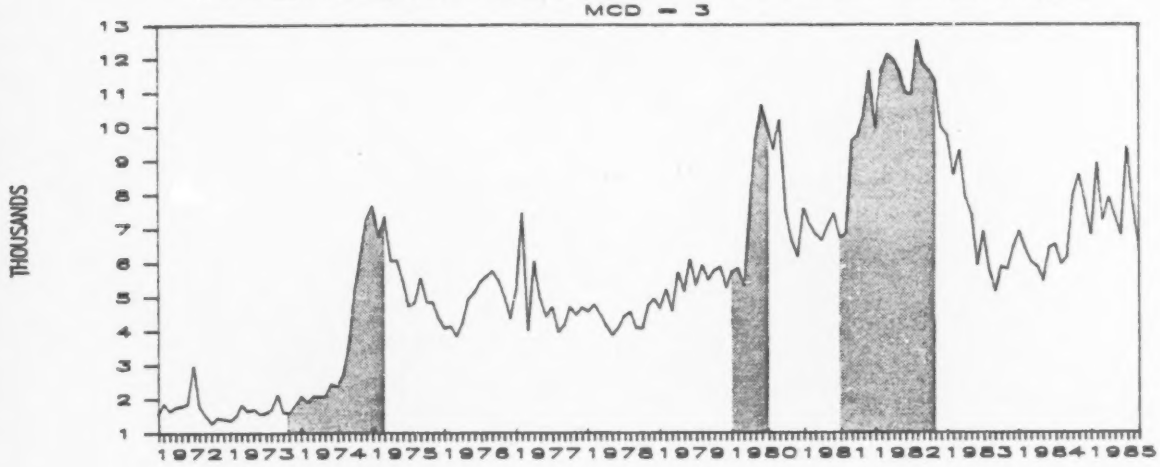


TOTAL UNEMPLOYMENT RATE



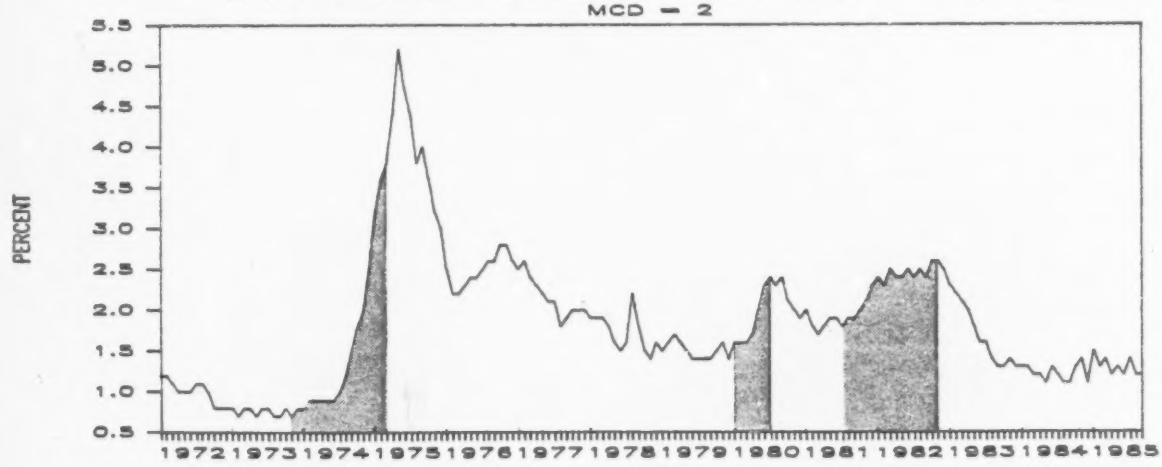
AVERAGE WEEKLY INITIAL CLAIMS

MCD – 3



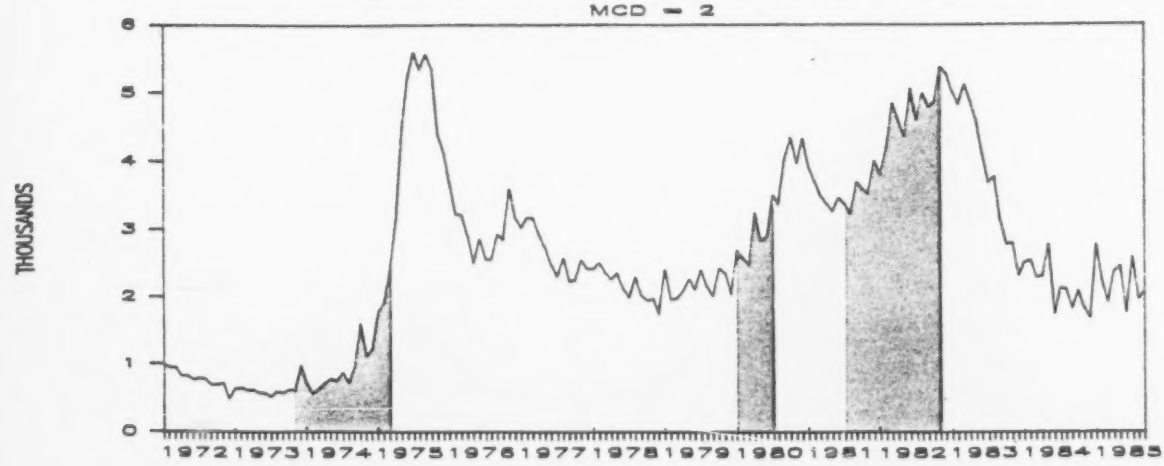
INSURED UNEMPLOYMENT RATE

MCD – 2



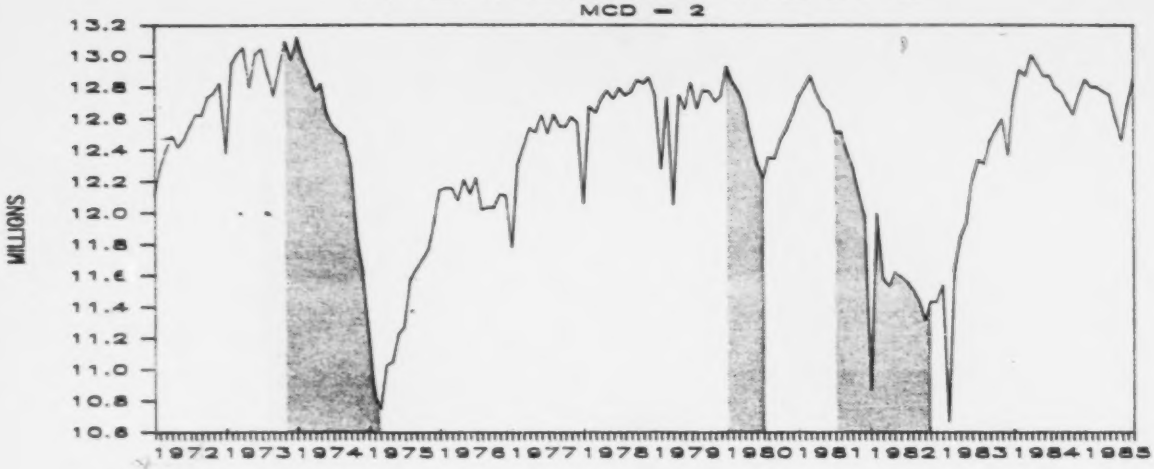
U. I. FINAL PAYMENTS

MCD – 2



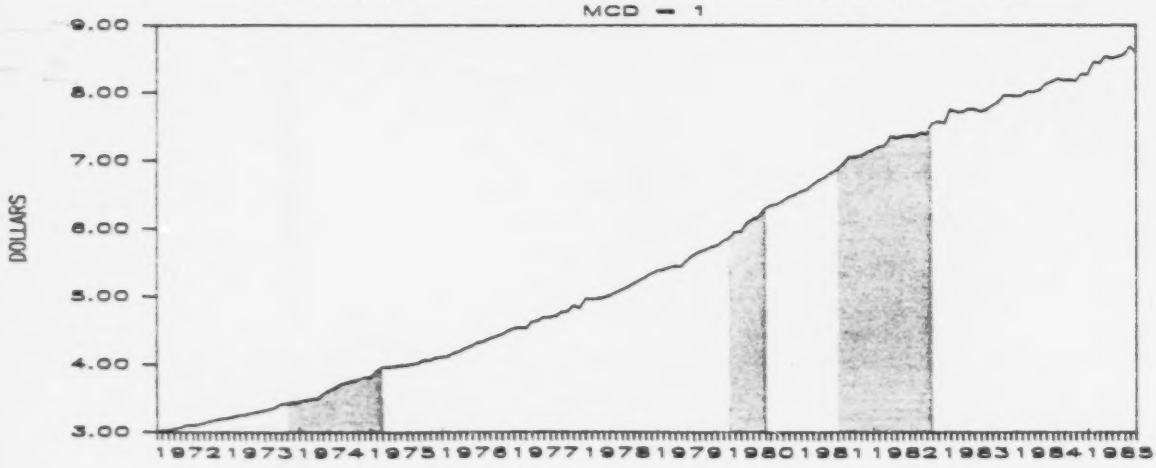
AVERAGE MANHOURS

MCD – 2



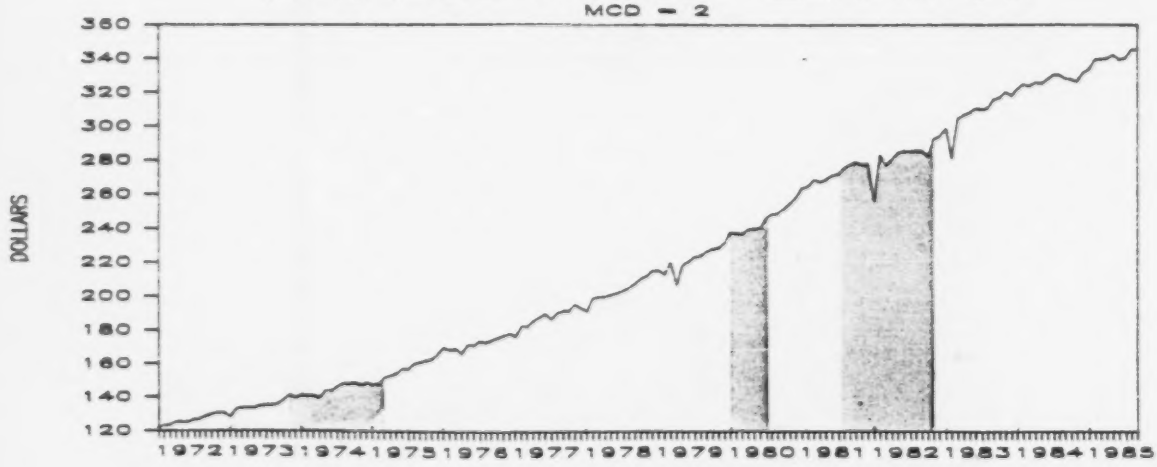
AVERAGE HOURLY EARNINGS

MCD – 1



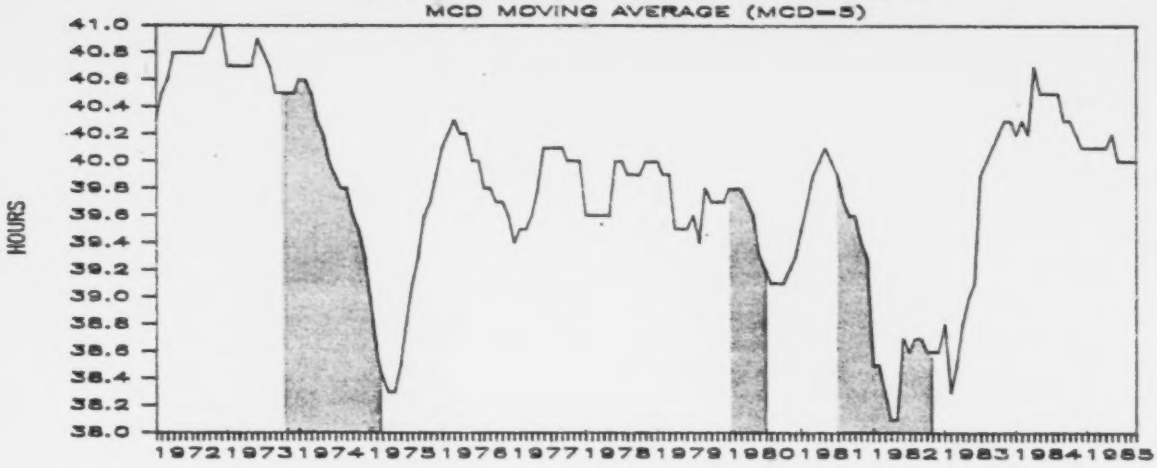
AVERAGE WEEKLY EARNINGS

MCD – 2



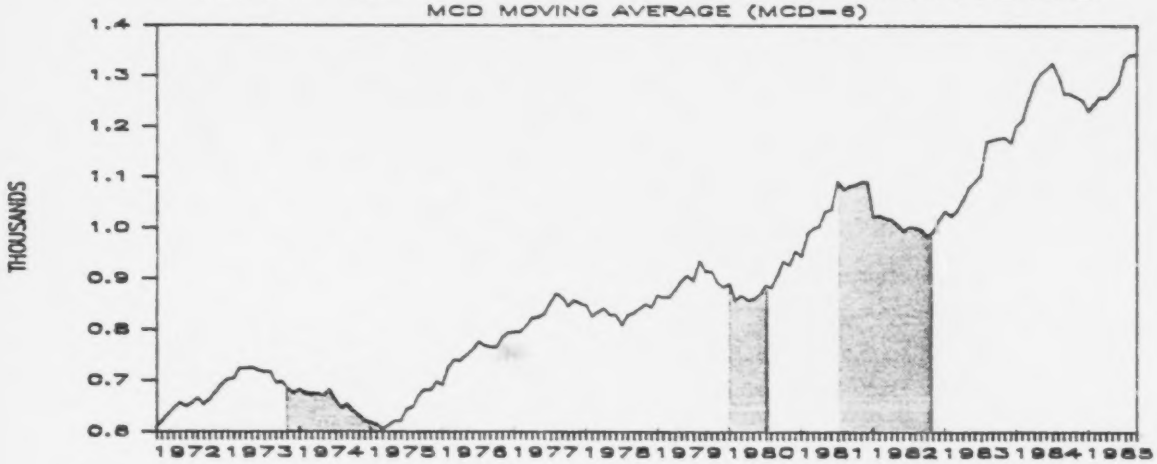
AVERAGE WORKWEEK

MCD MOVING AVERAGE (MCD=5)



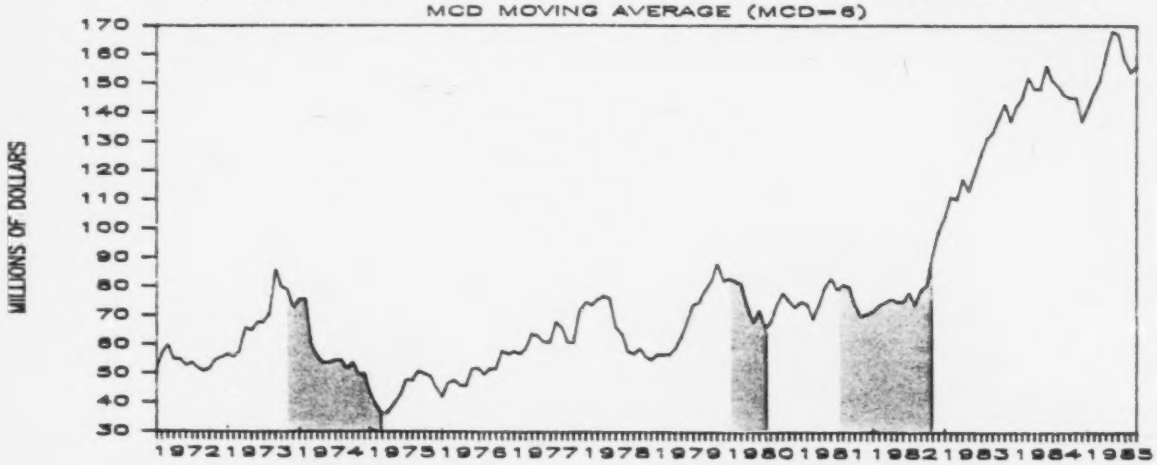
NEW BUSINESS INCORPORATIONS

MCD MOVING AVERAGE (MCD=6)



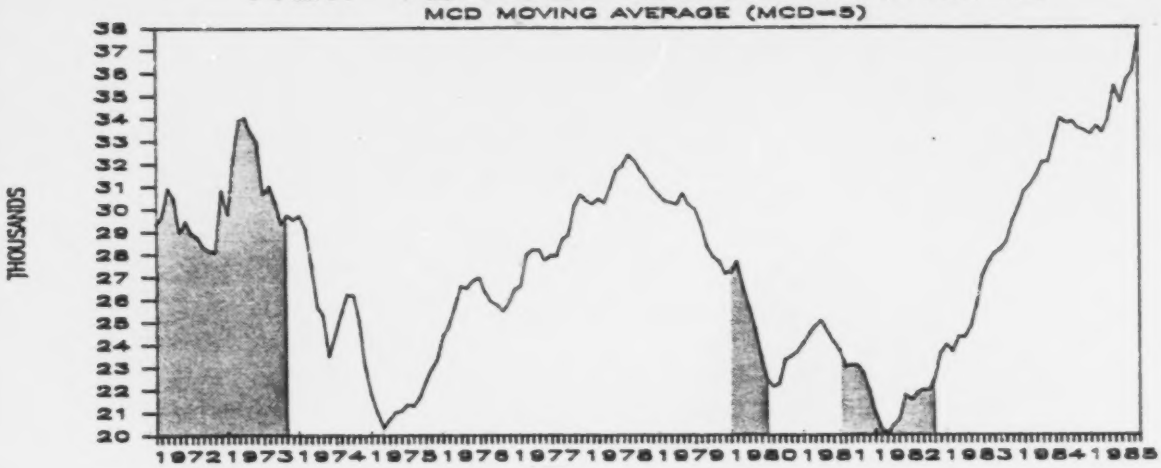
VALUATION OF BUILDING PERMITS

MCD MOVING AVERAGE (MCD=6)



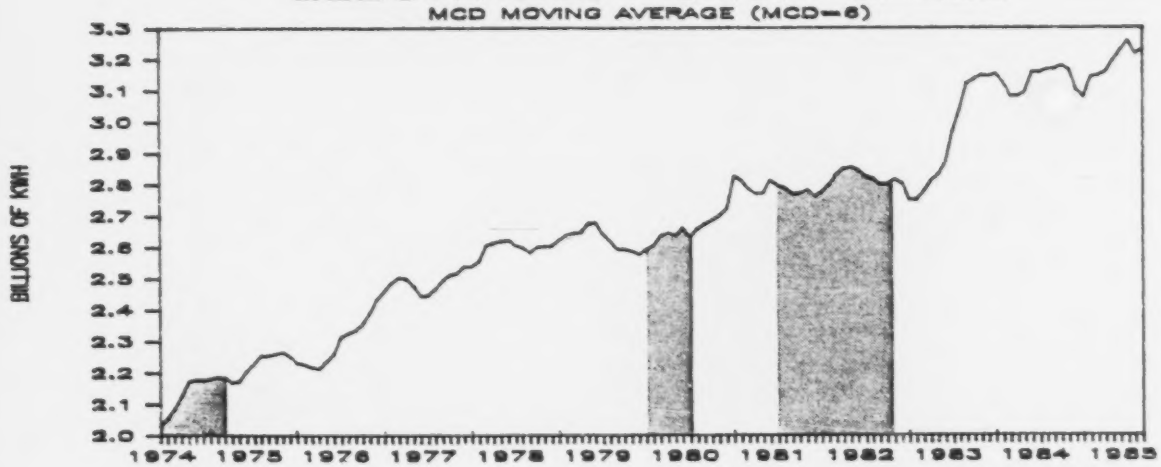
NEW VEHICLE REGISTRATIONS

MCD MOVING AVERAGE (MCD=5)



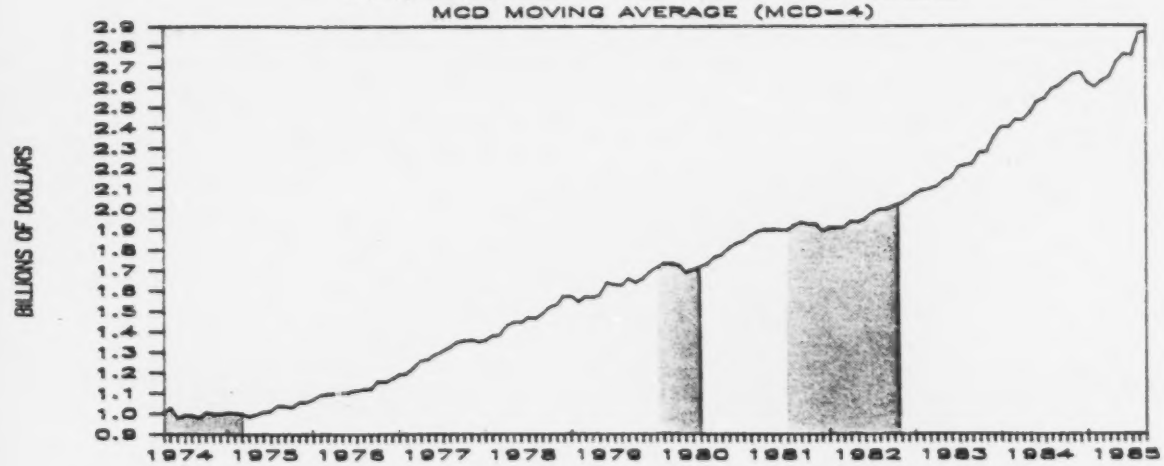
ELECTRICAL POWER SALES

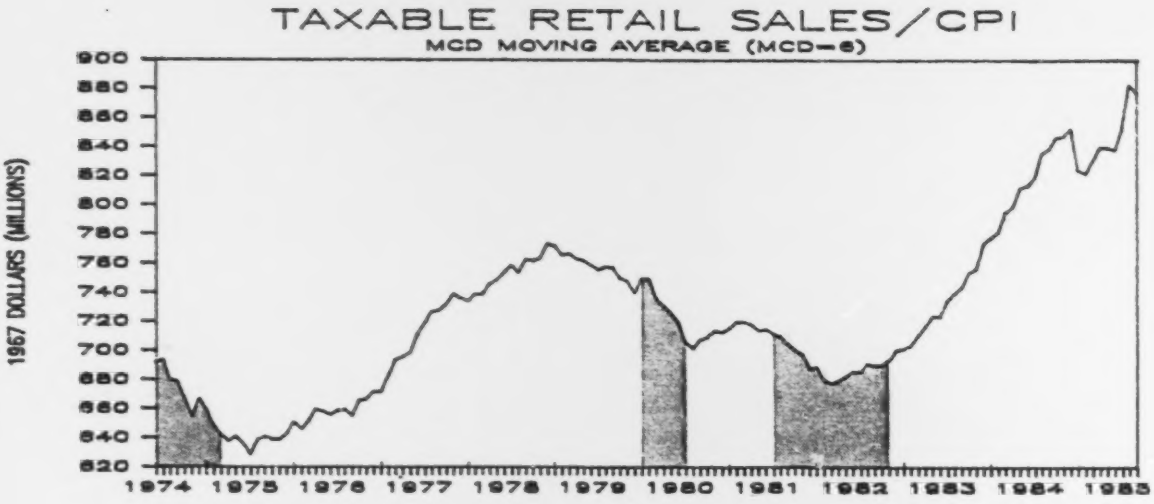
MCD MOVING AVERAGE (MCD=6)



TAXABLE RETAIL SALES

MCD MOVING AVERAGE (MCD=4)




TAXABLE RETAIL SALES/CPI
MCD MOVING AVERAGE (MCD-6)
1967 DOLLARS (MILLIONS)
900
880
860
840
820
800
780
760
740
720
700
680
660
640
620
1974 1975 1976 1977 1978 1979 1980 1981 1982 1983 1984 1985

4/1986
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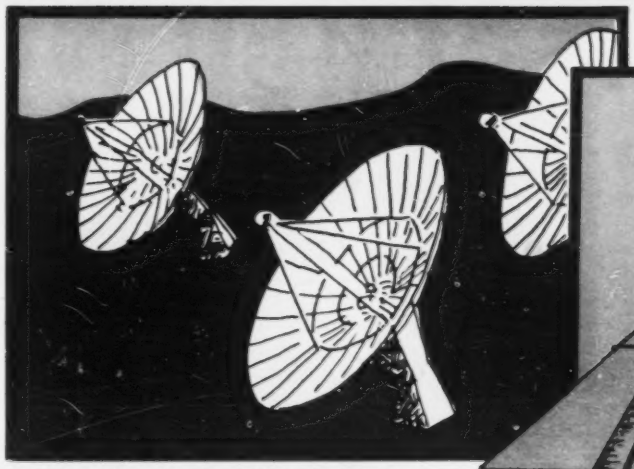
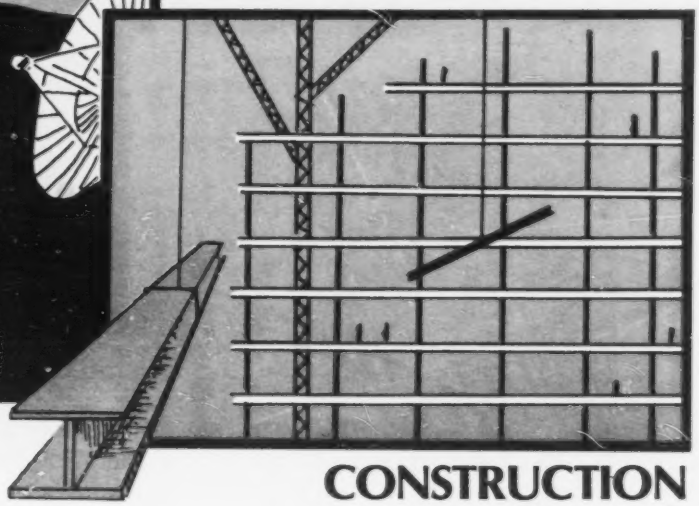
VIRGINIA ECONOMIC INDICATORS

VOL XVII NO. 4

4th QUARTER 1985 DATA

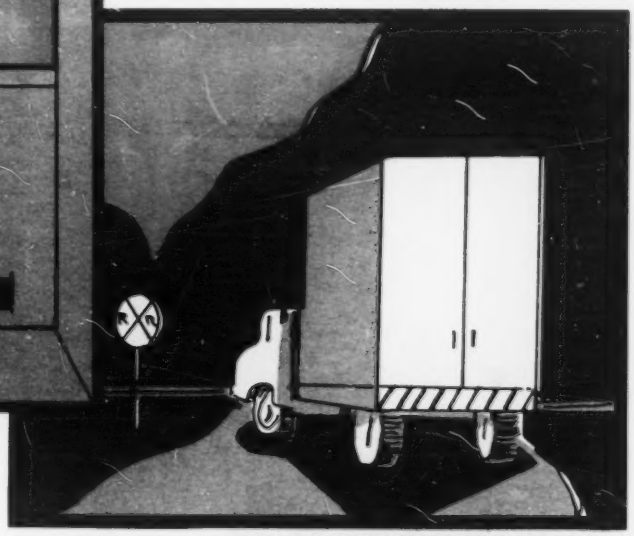


COMMUNICATION



CONSTRUCTION

BANKING



TRANSPORTATION

Virginia Employment Commission

FOREWORD

This publication is designed to depict the movement of Virginia's key economic indicators in graphic and tabular form with accompanying narrative analysis.

We welcome any comments, suggestions, or questions concerning Virginia Economic Indicators. Please contact Ralph C. Robinson, Director, Economic Information Services Division, P. O. Box 1358, Richmond, Virginia 23211, telephone (804) 786-7496, for additional information or explanation of the contents of this document.

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Fourth Quarter Economy Wears Paler Colors Than the Year's Pace

The 1.2 percent Fourth Quarter 1985 GNP real growth rate (measured in 1982 dollars) settled below the 2.3 percent growth for the year, but there were flashes of color at the tail end of 1985's garb.

- Retail sales for December were up 1.9 percent and consumer spending was 2 percent above November, driven by an impressive 1.4 percent December growth in personal income. This put their annual rates at 4.7, 3.2, and 1.6 percent, respectively, remarkable for the level of consumer debt in December. Even normally slow January sales held at the December level.

- Housing starts rebounded to 1.73 million annual rate, about 17 percent above November, to finish 1985 at 1.74 million, while January starts jumped just above 2 million.

- December industrial production jumped 0.7 percent, highest since mid-1984, but finished up only 2.2 percent for 1985.

- New orders for durables rose sharply by 4.2 percent in December, but manufacturing capacity use finished 1985 at 80.3 percent, about the same as 1984 when it hit the recovery's high of 81.8 percent.

Further gains in manufacturing depend on whether imports have leveled out, whether inventories are in line, and if consumers sustain spending at the current high debt level, which in October stood at 19.4 percent of after tax income. The import picture will not be clear until late 1986 when the impact of a declining dollar emerges. Three factors painted a bright hue for the 1985 close and 1986 unfolding.

- Continued monetary ease - M_1 up 9.2 percent, M_2 up 5.5 percent - in December accompanied by the continued gradual slide in long-term interest rates.

- A surge in stock market prices bolstering the spending plans of consumers.

- Drop in oil prices to under $20, brightening the inflation outlook.

The surge in retail, service, and construction employment forced upscaling of 1986 employment forecasts. After breaking the 7 percent barrier at 6.9 percent, the unemployment rate fell to 6.7 percent in January, seasonally adjusted. Hourly earnings of factory workers broke the $9.70 per hour level.

Virginia's Retail Sales and Incomes Outpace Nation

With state 1985 retail sales moving at 10.1 percent (excl. autos), more than twice the U. S. rate, and personal income advancing about 8 percent (1.2 percent ahead of the nation), Virginia again surpassed the nation. However, despite strong construction growth in Virginia driven by 1984's 11-year high of 62,800 total housing starts, the 1985 slide to 59,500 (down 5.5 percent) represents a 3,300 unit drop. As in Table 1 below, about 2,000 of this drop is single family homes.

The major culprit was the collapse of the Second Quarter 1985. As in Table 2, 1984.2 posted 19,100 starts where 1985.2 fell 4,000 below that level to 15,100. The other three quarters for the two years were comparatively similar. 1985.2 was a slow growth period in the U. S. and for Virginia.

TABLE 1 - ANNUAL HOUSING STARTS - VIRGINIA

Year	Total Starts	Single Family Starts	Multi-Family Starts
1977	55,000	42,000	13,000
1978	51,000	40,000	11,000
1979	43,400	34,000	9,400
1980	36,700	29,000	7,700
1981	29,500	23,000	6,500
1982	29,100	23,000	6,100
1983	53,800	42,900	10,900
1984	62,800	45,800	17,000
1985	59,500	42,900	15,600

SOURCE: National Home Builders Association

TABLE 2 - QUARTERLY HOUSING STARTS - VIRGINIA

Year	Total Starts	Single Family Starts	Multi-Family Starts
1984 - Qtr. 1	13,500	11,200	2,300
Qtr. 2	19,100	14,100	5,000
Qtr. 3	16,000	11,600	4,400
Qtr. 4	14,200	8,900	5,300
1985 - Qtr. 1	13,400	10,300	3,100
Qtr. 2	15,100	11,800	3,300
Qtr. 3	16,500	11,700	4,800
Qtr. 4	14,500	9,100	5,400

HIGHLIGHTS
VIRGINIA ECONOMIC INDICATORS
Fourth Quarter 1985

° During the Fourth Quarter 1985, seven of the Virginia Economic Indicator series set all-time records on a seasonally adjusted basis. Five records came in December and two in October.

- Nonagricultural wage and salary employment reached 2,512,800 in December, representing a 4.5 percent increase over the December 1984 level.

- Average hourly earnings of manufacturing workers rose to $8.69 in December, 5.0 percent above the year-ago figure.

- Average weekly earnings of the same workers also hit a peak in December at $352.39, 6.2 percent ahead of the December 1984 level.

- The rapid pace of new business incorporations continued, reaching 1,613 in December, 31.6 percent above a year ago.

- The valuation of building permits issued in the State surged, hitting a peak of $223.4 million in December, 82.4 percent above the previous year. The increase in buiding permits during the quarter was apparently influenced by changes in tax laws setting less favorable depreciation write-offs for commercial property started after 1985.

- Spurred by attractive financing packages offered mainly by manufacturers, new vehicle registrations rose to 44,394 in October, 29.3 percent above the October 1984 level.

- In anticipation of a record holiday season, taxable retail sales passed the $3 billion mark in October, 13.4 percent better than October 1984.

° The total unemployment rate in Virginia averaged 5.3 percent during the fourth quarter, down from 5.9 percent in the third quarter. The fourth quarter average was slightly above the same period of a year ago, when unemployment averaged 5.1 percent.

° Despite the over-the-year increase in total unemployment, average weekly initial claims for Unemployment Insurance, a leading indicator of the economy's health, showed improvement in the fourth quarter. On a seasonally adjusted basis, initial claims dropped nearly 20 percent from the Third Quarter and 22.7 percent from the Fourth Quarter 1984.

° Coal production in Virginia surged by 9.7 percent from 1984 to 1985. This was the largest yearly increase for any state east of the Mississippi. While production increased, mining employment declined by nearly 4 percent, a sign that productivity per worker is rising in Virginia's mines.

° Virginia once again surpassed the nation in personal income growth during 1985. The State's growth rate was 8 percent compared with the national rate of 6.8 percent. Virginia ranked twelfth in the nation in 1984 in per capita personal income at $13,254 and possibly improved its position during 1985.

° Housing starts totaled 59,500 during 1985, the second highest yearly total since 1973, exceeded only by the 1984 total of 62,800. The current downward drift in mortgage rates spells another good performance for 1986.

° The Consumer Price Index for All Urban Consumers showed an annual average change of 3.6 percent during 1985, below the 1984 annual rate of 4.3 percent.

VIRGINIA ECONOMIC INDICATORS

VOL. XVII, NO. 4 FOURTH QUARTER DATA

Indicators Finished the Year on a Strong Note

The 15 series used to measure the performance of the Virginia economy finished the year on a strong note in the fourth quarter after having exhibited somewhat erratic movement during the third quarter. Seven indicators: nonagricultural employment, average hourly earnings, average weekly earnings, new business incorporations, valuation of building permits, new vehicle registrations, and taxable retail sales all forged ahead to new all-time highs during the fourth quarter. Four series: nonagricultural employment, the total unemployment rate, average manhours worked, and average weekly earnings were consistently positive for each month of the fourth quarter and all other series except average weekly initial claims, UI final payments, electric power sales, and taxable retail sales were positive two out of three months.

The indicators started the quarter in October with 12 series positive, two down, and one unchanged. Only unemployment final payments, which mainly reflected benefit exhaustions from permanent plant and mine closings earlier in the year, and electric power sales, down because of an unusually mild fall, were negative. November's performance was not as spectacular with seven series up, seven down, and one unchanged. The five Business Indicator series were all down in November although all but electric power sales were still at fairly high levels. The other four series just could not sustain the record breaking paces set in October for two months in a row. In December, the indicators again came on strong with 11 series up, three down, and one unchanged. In December, only average weekly initial claims, UI final payments, and taxable retail sales were negative. Nonfarm employment, the two earning level series, new business incorporations, and valuation of building permits ended the year with all-time highs in December.

The six month moving average of the number of rising indicators (page 8) serves to highlight the fourth quarter's good performance. The moving average enhances analysis because it smooths out much of the irregularity present in many of the individual series.

Seven Series Break New Ground in the Year's Final Quarter

Statewide nonagricultural employment broke new ground each month of 1985's final quarter to end the year at 2,512,800 in December, 4.5 percent above the December 1984 level. Rapid job growth in trade, services, construction, transportation, and government boosted nonfarm payrolls. Factory employment, which had suffered earlier in 1985 from import competition related layoffs because of the then strong U. S. dollar, increased in October, held its own in November, and then gained again in December to finish the year at 424,200 just 600 or 0.1 percent shy of the December 1984 level.

Of the four indicators that measure unemployment's impact on the economy, the total unemployment rate was positive throughout the quarter, and the average weekly insured unemployment rate improved in November and December after being unchanged in October. October and December increases in unemployment final payments reflected factory and mine workers displaced by permanent layoffs earlier in the year, passing out of benefit status in the fourth quarter. Average weekly initial claims were negative in November and December because of an influx of claims filed in the aftermath of flooding from an unusually late tropical storm, Juan, which did considerable damage to portions of Central and Western Virginia.

The production worker indicator levels generally followed the slightly improved employment trend in manufacturing. Average manhours worked and the average weekly wage increased each month of the quarter. The length of the production work week increased in October and November and then held its own in December at 40.6 hours, 0.5 hour longer than a year earlier. The average hourly wage was up in October and December, but was slightly off in November because of extra lower paid workers used to process a later than usual harvest this year. Hourly wages bounced back in December to an all-time high of $8.69 an hour.

The five business related indicators were very strong in October, except for electric power sales which were affected by unusually warm weather, seemed to take a holiday in November, and then all but taxable retail sales bounced back strongly in December. November's levels for several of the series were not as bad as they first appeared, it was just that the series could not sustain October's very high levels for two months in a row. New business incorporations increased 16.4 percent in October, fell 6.7 percent in November, and then climbed 15.6 percent to an all-time high of 1,613 in December. The volatile valuation of building permits climbed 18.8 percent in October, fell over 30 percent in November, then soared 60.3 percent in December to a record $223.4 million. It appeared a number of construction projects were starting before 1985's end to take advantage of any possible tax credits. New vehicle registrations reached an all-time high in October of 44,394 because of finance incentive programs offered by most of the major motor manufacturers and were lower in November when those special sales programs ended. December car registrations were just a little bit better than in November. A very mild fall affected electric power sales until December when more seasonable weather returned. Taxable retail sales set an all-time record in October and then were somewhat off in November and December. November's decline reflected mild weather and a late Thanksgiving, and December's decline was probably more apparent than real. December of 1985 had only four sales reporting weeks compared with the more usual five.

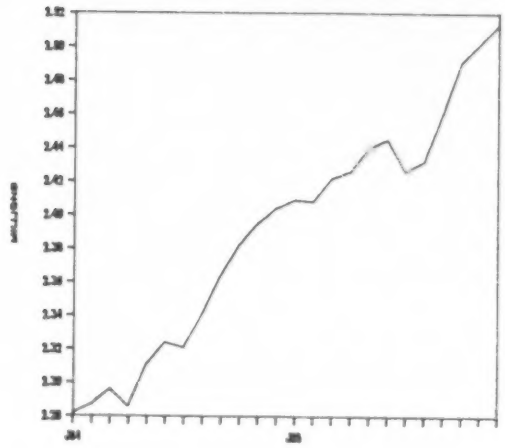
EMPLOYMENT AND UNEMPLOYMENT INDICATORS
January 1984 to December 1985

	Nonagricultural Wage & Salary Emp.* (Thousands)		Manufacturing Employment* (Thousands)		Total Unemployment Rate* (Percent)	
1984	Unadj.	Adj.	Unadj.	Adj.	Unadj.	Adj.
January	2,238.0	2,281.6	411.8	416.4	6.1	5.5
February	2,243.9	2,287.2	413.7	418.5	5.6	5.0
March	2,268.3	2,295.8	416.2	420.2	5.3	5.0
April	2,289.5	2,296.4	416.7	418.8	4.9	5.0
May	2,320.3	2,311.1	418.2	419.9	4.8	5.0
June	2,356.1	2,323.5	422.7	421.9	4.8	4.9
July	2,337.4	2,321.2	423.5	424.4	5.1	5.1
August	2,355.4	2,341.4	428.1	426.4	4.4	4.7
September	2,383.3	2,364.4	429.7	424.2	4.4	4.9
October	2,391.6	2,382.1	428.0	423.8	4.8	5.1
November	2,401.8	2,394.6	427.2	424.2	5.0	5.1
December	2,413.7	2,404.1	426.9	424.8	5.3	5.1
1985						
January	2,362.8	2,408.6	422.6	427.3	6.1	5.5
February	2,361.8	2,407.5	422.3	427.4	6.2	5.6
March	2,392.6	2,421.7	422.9	427.2	5.9	5.5
April	2,418.2	2,425.5	421.9	424.0	5.5	5.6
May	2,449.7	2,439.9	421.1	422.8	5.5	5.7
June	2,481.2	2,444.5	423.1	422.3	5.7	5.8
July	2,443.1	2,426.1	417.9	418.7	6.0	6.0
August	2,446.9	2,432.3	423.6	421.9	5.4	5.8
September	2,479.3	2,459.6	426.3	420.8	5.2	5.9
October	2,498.7	2,491.2	426.8	422.6	5.2	5.5
November	2,507.3	2,502.3	425.6	422.6	5.3	5.4
December	2,522.9	2,512.8	425.9	424.2	5.3	5.1

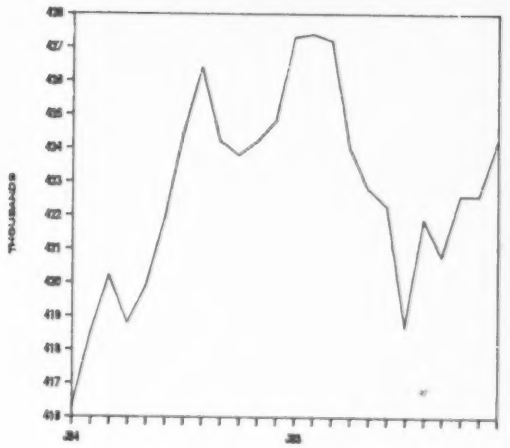
	Average Weekly Initial Claims (Number)		Avg. Wkly. Insured Unemployment Rate (Percent)		U. I. Final Payments (Number)	
1984	Unadj.	Adj.	Unadj.	Adj.	Unadj.	Adj.
January	12,255	6,919	1.9	1.3	2,375	2,494
February	6,459	6,406	1.7	1.3	2,368	2,533
March	5,584	6,019	1.5	1.2	2,814	2,273
April	5,033	5,872	1.2	1.2	3,016	2,296
May	4,098	5,470	1.0	1.1	3,031	2,751
June	5,580	6,454	1.1	1.3	1,987	1,734
July	5,956	6,536	1.0	1.2	2,134	2,112
August	4,108	5,966	0.9	1.1	1,972	2,095
September	4,213	6,170	0.8	1.1	1,434	1,806
October	6,956	7,994	1.0	1.3	1,601	2,077
November	8,771	8,580	1.3	1.4	1,545	1,823
December	12,900	7,787	1.2	1.1	1,575	1,675
1985						
January	12,108	6,829	2.2	1.5	2,613	2,753
February	8,996	8,925	1.8	1.3	2,052	2,195
March	6,752	7,252	1.7	1.4	2,374	1,907
April	6,767	7,924	1.2	1.2	3,117	2,367
May	5,475	7,369	1.1	1.3	2,680	2,436
June	5,869	6,824	1.0	1.2	2,019	1,756
July	8,538	9,414	1.2	1.4	2,571	2,561
August	5,249	7,663	1.0	1.2	1,845	1,952
September	4,344	6,398	0.9	1.2	1,630	2,066
October	5,002	5,717	0.9	1.2	1,862	2,428
November	6,100	5,928	1.0	1.1	1,557	1,830
December	11,965	7,195	1.1	1.0	1,836	1,959

*These series have been adjusted to First Quarter 1985 benchmarks.

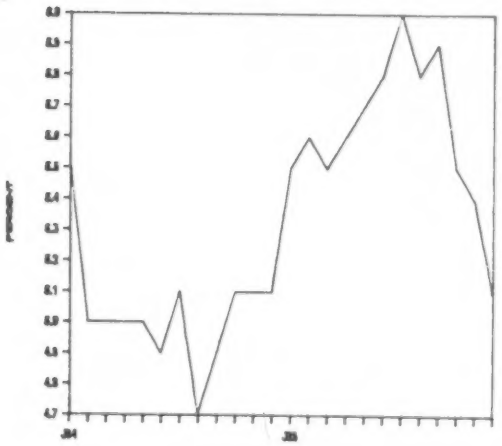
NONAG W & S EMPLOYMENT



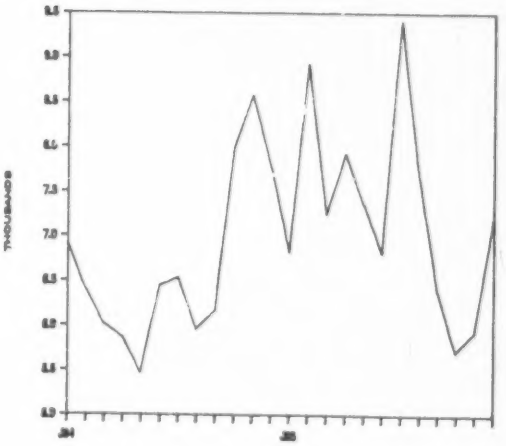
MANUFACTURING EMPLOYMENT



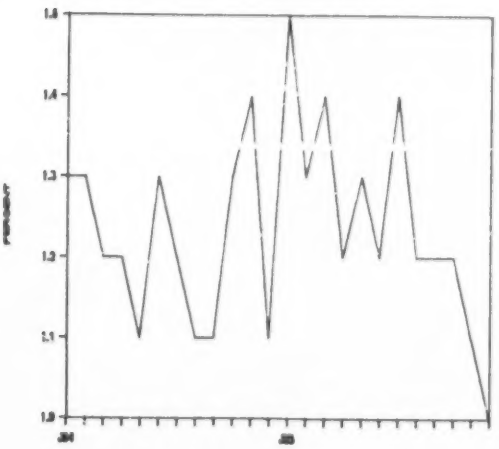
TOTAL UNEMPLOYMENT RATE



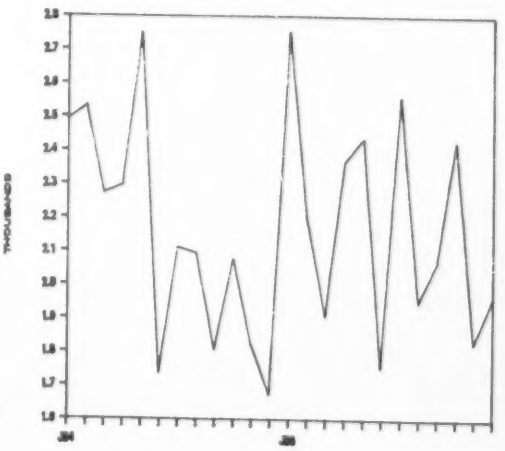
AVG. WEEKLY INIT. CLAIMS



INSURED UNEMPLOYMENT RATE



U. I. FINAL PAYMENTS

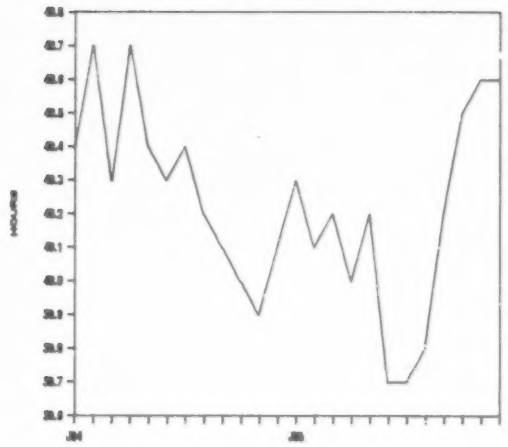


MANUFACTURING PRODUCTION WORKER INDICATORS
January 1984 to December 1985

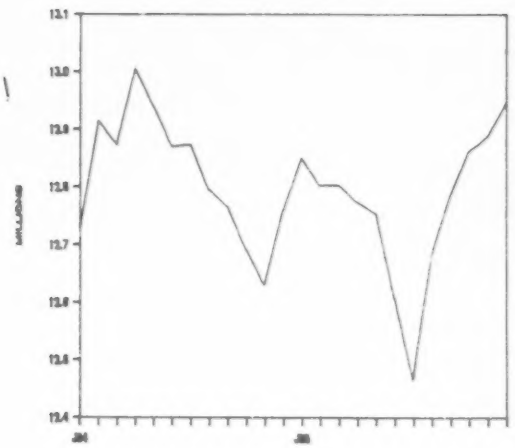
	Average Weekly Hours (Hours)		Average Manhours (Thousands)	
1984	Unadj.	Adj.	Unadj.	Adj.
January	39.6	40.4	12,379.8	12,732.0
February	40.1	40.7	12,586.3	12,914.4
March	40.0	40.3	12,643.5	12,375.2
April	40.3	40.7	12,781.8	13,006.0
May	40.3	40.4	12,851.3	12,940.9
June	40.8	40.3	13,058.5	12,870.7
July	40.3	40.4	12,807.6	12,874.7
August	40.4	40.2	12,873.2	12,795.9
September	40.4	40.1	13,036.1	12,767.0
October	40.1	40.0	12,879.7	12,693.1
November	40.4	39.9	12,894.1	12,631.4
December	40.8	40.1	13,031.5	12,759.1
1985				
January	39.4	40.3	12,491.1	12,850.9
February	39.5	40.1	12,470.1	12,803.0
March	39.9	40.2	12,573.1	12,803.6
April	39.6	40.0	12,557.4	12,774.6
May	40.2	40.2	12,665.4	12,754.7
June	40.2	39.7	12,799.1	12,610.0
July	39.6	39.7	12,416.1	12,466.0
August	40.0	39.8	12,759.8	12,683.7
September	40.5	40.2	13,053.7	12,785.2
October	40.5	40.5	13,042.5	12,862.4
November	41.0	40.6	13,146.3	12,888.5
December	41.3	40.6	13,217.7	12,945.8

	Average Hourly Earnings (Dollars)		Average Weekly Earnings (Dollars)	
1984	Unadj.	Adj.	Unadj.	Adj.
January	8.04	7.95	318.38	322.02
February	7.97	7.97	319.60	324.84
March	8.03	8.02	321.20	323.69
April	8.02	8.02	323.21	325.71
May	8.03	8.05	323.61	325.13
June	8.09	8.13	330.07	327.70
July	8.14	8.17	328.04	330.35
August	8.16	8.21	329.66	330.35
September	8.17	8.19	330.07	327.98
October	8.17	8.20	327.62	327.39
November	8.23	8.18	332.49	326.40
December	8.31	8.28	339.05	331.70
1985				
January	8.37	8.28	329.78	333.79
February	8.45	8.46	333.78	339.55
March	8.45	8.44	337.16	339.88
April	8.53	8.54	337.79	340.51
May	8.48	8.51	340.90	342.27
June	8.51	8.54	342.10	339.38
July	8.54	8.57	338.18	340.56
August	8.62	8.68	344.80	345.49
September	8.58	8.60	347.49	345.42
October	8.61	8.65	348.71	348.71
November	8.69	8.64	356.29	349.65
December	8.72	8.69	360.14	352.39

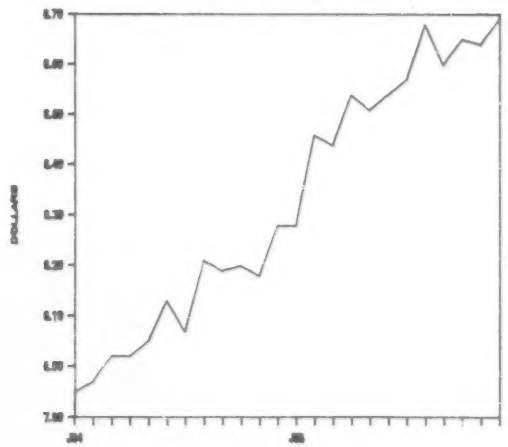
AVERAGE WEEKLY HOURS



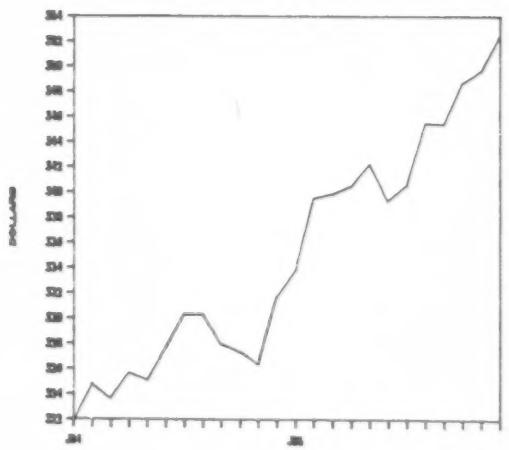
AVERAGE MANHOURS



AVERAGE HOURLY EARNINGS



AVERAGE WEEKLY EARNINGS

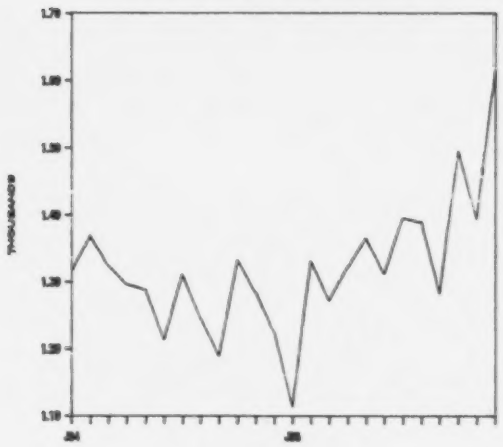


BUSINESS INDICATORS
January 1984 to December 1985

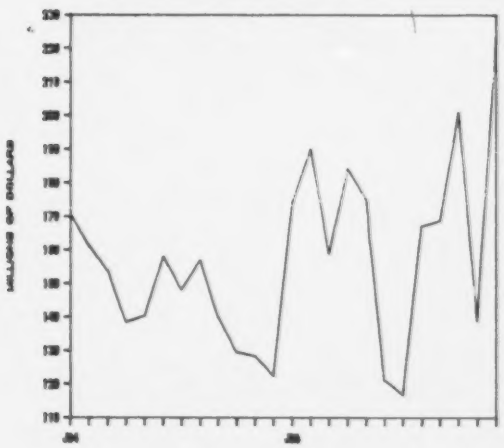
	New Business Incorporations (Number)		Valuation of Bldg. Permits ($ Millions)		New Vehicle Registrations (Number)	
1984	Unadj.	Adj.	Unadj.	Adj.	Unadj.	Adj.
January	1,373	1,320	136.3	169.9	29,459	32,794
February	1,329	1,369	117.4	161.1	28,700	32,245
March	1,476	1,324	189.1	153.8	34,898	29,971
April	1,417	1,297	153.4	138.5	35,032	31,041
May	1,300	1,288	135.2	140.4	36,395	33,517
June	1,246	1,215	193.7	158.1	37,953	32,229
July	1,243	1,311	169.1	148.2	42,134	38,367
August	1,290	1,246	155.3	157.0	35,989	33,437
September	1,128	1,190	137.6	139.9	30,085	30,812
October	1,302	1,333	128.9	129.5	31,383	34,333
November	1,152	1,284	141.1	128.3	27,628	31,985
December	1,148	1,226	91.1	122.5	23,205	31,768
1985						
January	1,154	1,114	139.1	174.1	33,530	37,464
February	1,294	1,331	139.8	190.0	29,072	32,665
March	1,424	1,274	195.6	159.0	38,164	32,843
April	1,447	1,322	204.4	184.3	39,165	34,752
May	1,380	1,365	166.0	175.3	42,505	39,211
June	1,348	1,313	149.5	121.2	40,170	33,927
July	1,315	1,396	133.7	116.9	41,215	37,571
August	1,445	1,389	165.0	167.3	37,532	34,816
September	1,212	1,284	166.0	169.0	41,423	42,529
October	1,455	1,495	198.5	200.7	40,354	44,394
November	1,254	1,395	154.4	139.4	29,286	33,779
December	1,508	1,613	167.1	223.4	25,460	34,781

	Electrical Power Sales (Mil. of KHW)		Taxable Retail Sales ($ Millions)	
1984	Unadj.	Adj.	Uadj.	Adj.
January	3,777.6	3,121.1	2,236.0	2,436.4
February	3,414.4	3,073.3	2,085.7	2,341.3
March	3,145.6	3,137.8	2,295.5	2,487.3
April	2,882.9	3,129.2	2,427.9	2,481.0
May	2,639.7	3,163.7	2,723.1	2,571.2
June	3,080.9	3,281.3	2,563.8	2,561.5
July	3,379.9	3,122.2	2,576.8	2,549.6
August	3,416.7	3,071.5	2,600.0	2,658.3
September	3,204.7	3,153.8	2,653.4	2,636.6
October	2,772.0	3,149.1	2,667.6	2,679.9
November	2,740.3	3,078.5	2,679.9	2,667.8
December	3,086.8	3,049.2	3,322.3	2,689.3
1985				
January	3,594.5	2,963.3	2,247.3	2,426.9
February	3,835.0	3,461.2	2,311.6	2,591.5
March	3,186.8	3,183.6	2,599.4	2,804.1
April	2,959.2	3,209.5	2,720.0	2,767.0
May	2,753.3	3,297.4	2,894.6	2,725.6
June	3,059.5	3,254.8	2,739.5	2,747.7
July	3,400.3	3,136.8	2,797.3	2,764.1
August	3,563.5	3,204.6	3,133.0	3,216.6
September	3,626.9	3,576.8	2,750.8	2,753.6
October	2,892.8	3,344.3	3,027.4	3,039.6
November	2,769.9	3,108.8	3,031.9	3,019.8
December	3,403.8	3,370.1	3,214.4	2,598.5

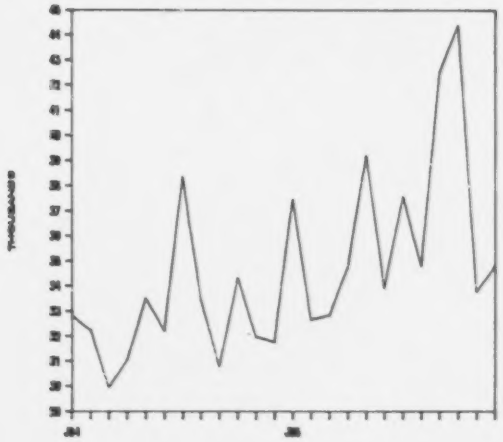
NEW BUSINESS INCORPORATIONS



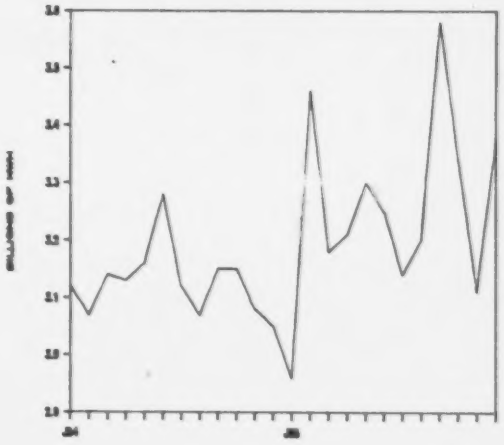
VALUATION OF BUILDING PERMITS



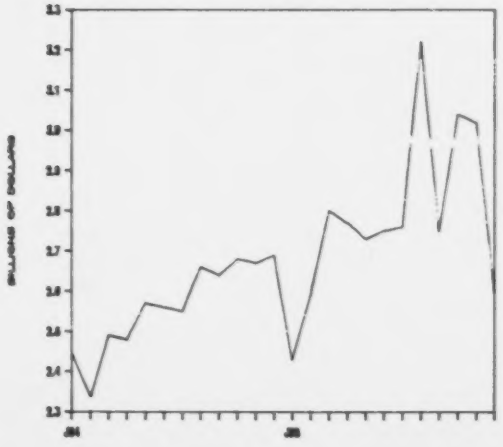
NEW VEHICLE REGISTRATIONS



ELECTRICAL POWER SALES



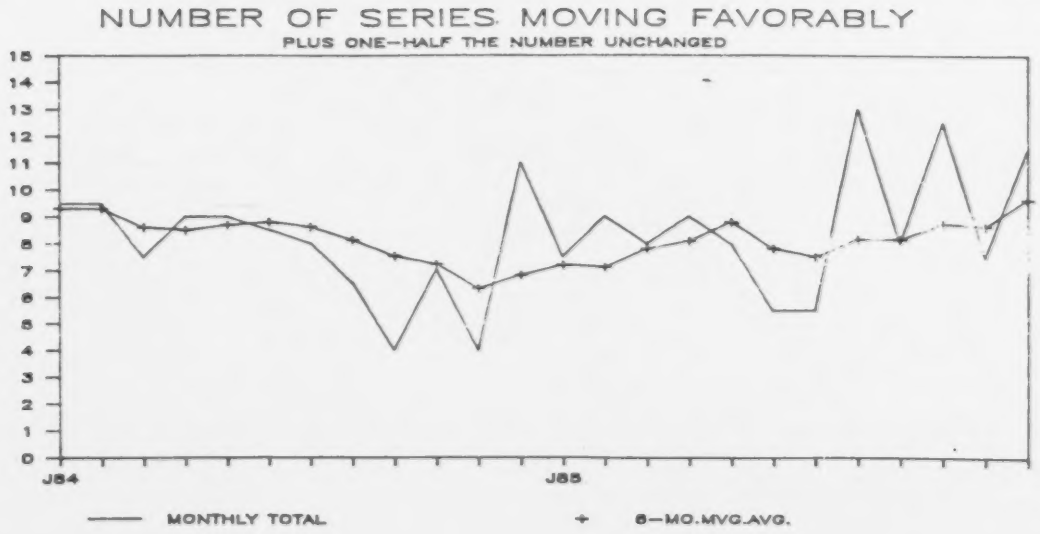
TAXABLE RETAIL SALES



DATA SUMMARY DECEMBER 1985 (SEASONALLY ADJUSTED DATA)	Dec. 1985	Nov. 1985	Dec. 1984	Percent & (Direction) of Change 1/ Nov. '85- Dec. '85	 Dec. '84- Dec. '85
EMPLOYMENT					
*Nonagricultural Wage & Salary Employment (000)	2,512.8	2,502.3	2,404.1	+ 0.4 (+)	+ 4.5 (+)
*Manufacturing Employment (000)	424.2	422.6	424.8	+ 0.4 (+)	- 0.1 (-)
UNEMPLOYMENT					
*Total Unemployment Rate (%)	5.1	5.4	5.1	xxx (+)	xxx (0)
Average Weekly Initial Claims	7,195	5,928	7,787	+21.4 (-)	- 7.6 (+)
Average Weekly Insured Unemployment Rate (%)	1.0	1.1	1.1	xxx (+)	xxx (+)
Unemployment Insurance Final Payments	1,959	1,830	1,675	+ 7.1 (-)	+17.0 (-)
MANUFACTURING PRODUCTION WORKERS					
Average Weekly Hours	40.6	40.6	40.1	0.0 (0)	+ 1.2 (+)
Average Manhours (000)	12,945.8	12,888.5	12,759.1	+ 0.4 (+)	+ 1.5 (+)
Average Hourly Earnings ($)	8.69	8.64	8.28	+ 0.6 (+)	+ 5.0 (+)
Average Weekly Earnings ($)	352.39	349.65	331.70	+ 0.8 (+)	+ 6.2 (+)
BUSINESS					
New Business Incorporations	1,613	1,395	1,226	+15.6 (+)	+31.6 (+)
Valuation of Building Permits - 18 Cities ($M)	223.4	139.4	122.5	+60.3 (+)	+82.4 (+)
New Vehicle Registrations	34,781	33,779	31,768	+ 3.0 (+)	+ 9.5 (+)
Electrical Power Sales (M of KWH)	3,370.1	3,108.8	3,049.2	+ 8.4 (+)	+10.5 (+)
Taxable Retail Sales ($M)	2,598.5	3,019.8	2,689.3	-14.0 (-)	- 3.4 (-)

1/ + = Favorable, - = Not Favorable, 0 = No Change (less than .05%)
* Revised to First Quarter 1985 Benchmarks

SUMMARY



DATA SUMMARY NOVEMBER 1985 (SEASONALLY ADJUSTED DATA)	Nov. 1985	Oct. 1985	Nov. 1984	Percent & (Direction) of Change 1/ Oct. '85- Nov. '85	 Nov. '84- Nov. '85
EMPLOYMENT					
*Nonagricultural Wage & Salary Employment (000)	2,502.3	2,491.2	2,394.6	+ 0.5 (+)	+ 4.5 (+)
*Manufacturing Employment (000)	422.6	422.6	424.2	0.0 (0)	- 0.4 (-)
UNEMPLOYMENT					
*Total Unemployment Rate (%)	5.4	5.5	5.1	xxx (+)	xxx (-)
Average Weekly Initial Claims	5,928	5,717	8,580	+ 3.7 (-)	-30.9 (+)
Average Weekly Insured Unemployment Rate (%)	1.1	1.2	1.4	xxx (+)	xxx (+)
Unemployment Insurance Final Payments	1,830	2,428	1,823	-24.6 (+)	+ 0.4 (-)
MANUFACTURING PRODUCTION WORKERS					
Average Weekly Hours	40.6	40.5	39.9	+ 0.3 (+)	+ 1.8 (+)
Average Manhours (000)	12,888.5	12,862.4	12,631.4	+ 0.2 (+)	+ 2.0 (+)
Average Hourly Earnings ($)	8.64	8.65	8.18	- 0.1 (-)	+ 5.6 (+)
Average Weekly Earnings ($)	349.65	348.71	326.40	+ 0.3 (+)	+ 7.1 (+)
BUSINESS					
New Business Incorporations	1,395	1,495	1,284	- 6.7 (-)	+ 8.6 (+)
Valuation of Building Permits - 18 Cities ($M)	139.4	200.7	128.3	-30.5 (-)	+ 8.7 (+)
New Vehicle Registrations	33,779	44,394	31,985	-23.9 (-)	+ 5.6 (+)
Electrical Power Sales (M of KWH)	3,108.8	3,344.3	3,078.5	- 7.0 (-)	+ 1.0 (+)
Taxable Retail Sales ($M)	3,019.8	3,039.6	2,667.8	- 0.7 (-)	+13.2 (+)

DATA SUMMARY OCTOBER 1985 (SEASONALLY ADJUSTED DATA)	Oct. 1985	Sept. 1985	Oct. 1984	Percent & (Direction) of Change 1/ Sept. '85- Oct. '85	 Oct. '84- Oct. '85
EMPLOYMENT					
*Nonagricultural Wage & Salary Employment (000)	2,491.2	2,459.6	2,382.1	+ 1.3 (+)	+ 4.6 (+)
*Manufacturing Employment (000)	422.6	420.8	423.8	+ 0.4 (+)	- 0.3 (-)
UNEMPLOYMENT					
*Total Unemployment Rate (%)	5.5	5.9	5.1	xxx (+)	xxx (-)
Average Weekly Initial Claims	5,717	6,398	7,994	-10.6 (+)	-28.5 (+)
Average Weekly Insured Unemployment Rate (%)	1.2	1.2	1.3	xxx (0)	xxx (+)
Unemployment Insurance Final Payments	2,428	2,066	2,077	+17.5 (-)	+16.9 (-)
MANUFACTURING PRODUCTION WORKERS					
Average Weekly Hours	40.5	40.2	40.0	+ 0.7 (+)	+ 1.3 (+)
Average Manhours (000)	12,862.4	12,785.2	12,693.1	+ 0.6 (+)	+ 1.3 (+)
Average Hourly Earnings ($)	8.65	8.60	8.20	+ 0.6 (+)	+ 5.5 (+)
Average Weekly Earnings ($)	348.71	345.42	327.39	+ 1.0 (+)	+ 6.5 (+)
BUSINESS					
New Business Incorporations	1,495	1,284	1,333	+16.4 (+)	+12.2 (+)
Valuation of Building Permits - 18 Cities ($M)	200.7	169.0	129.5	+18.8 (+)	+55.0 (+)
New Vehicle Registrations	44,394	42,529	34,333	+ 4.4 (+)	+29.3 (+)
Electrical Power Sales (M of KWH)	3,344.3	3,576.8	3,149.1	- 6.5 (-)	+ 6.2 (+)
Taxable Retail Sales ($M)	3,039.6	2,753.6	2,679.9	+10.4 (+)	+13.4 (+)

1/ + = Favorable, - = Not Favorable, 0 = No Change (less than .05%)

* Revised to First Quarter 1985 Benchmarks

DOLLAR DEPRECIATION AND EMPLOYMENT IN VIRGINIA: A MIXED BLESSING

Our last issue promised an assessment of the impact of 20 percent dollar depreciation on Virginia. Total Virginia manufacturing employment was projected using the Chase Econometric model. For the 4th quarter 1985, manufacturing employment would be 418.2 thousand without dollar depreciation and also 418.2 thousand with depreciation. By 1986 year end, under dollar depreciation manufacturing employment would be 421.6 thousand compared with 421.5 thousand without depreciation, a gain of only 100 jobs. By year end 1987, 428.4 thousand manufacturing jobs would exist vs. 427.0 without depreciation, a gain of 1,463 jobs. Table 1 shows the quarterly Chase projections for manufacturing employment for 1985 - 1st quarter through 1987 - 4th quarter for the dollar depreciation model (Col. 3), the standard model without depreciation (Col. 2), the absolute employment difference (Col. 4), and the percent difference (Col. 5). By 1987 4th quarter, 20 percent dollar depreciation added only 0.34 percent to Virginia's manufacturing employment compared to a 1.06% increase projected for the U. S. in the same period. The higher concentration of heavy manufacturing in the midwest, the prime benefactor of dollar depreciation, relative to the lower concentration for Virginia, results in an overall greater benefit to the U. S. compared with Virginia. In addition, the higher concentration of trade in Virginia relative to the U. S. pulls Virginia trade employment down more than in the U. S. as a whole as import trade slows under dollar depreciation.

Table 1: Virginia Manufacturing Employment
(In Thousands)

Yr./Qtr.	Standard Forecast	Dollar Deprec. Forecast	Actual Difference-Employment	Percent Difference
85 1	422.748	422.748	0.000	0.000
85 2	419.053	419.053	0.000	0.000
85 3	416.428	416.428	0.000	0.000
85 4	418.207	418.206	0.001	0.000
86 1	420.385	419.988	0.396	0.094
86 2	420.120	419.729	0.391	0.093
86 3	420.467	420.233	0.234	0.056
86 4	421.465	421.601	0.135	0.032
87 1	422.800	423.268	0.468	0.111
87 2	424.647	425.298	0.651	0.153
87 3	425.526	426.626	1.101	0.258
87 4	426.972	428.435	1.463	0.341

The 20 percent dollar depreciation has much less effect on overall Virginia non-agricultural employment projected through 1987. Employment is actually slightly lower (See Table 2) in both 1986 4th quarter (2.499 mil. vs. 2.500 mil. without depreciation) and in 1987 4th quarter (2.542 vs. 2.548 without depreciation) a drop of 6,000 jobs. As will be shown, this is due to a reduction of employment in some nonmanufacturing sectors.

Table 2: Virginia Nonagricultural Employment
(In Thousands)

Yr./Qtr.	Standard Forecast	Dollar Depreciation	Actual Difference	Percent Difference
85 1	2,403.480	2,403.480	0.000	0.000
85 2	2,406.890	2,406.890	0.000	0.000
85 3	2,407.140	2,407.140	0.000	0.000
85 4	2,457.110	2,457.110	0.000	0.000
86 1	2,466.720	2,465.700	-1.024	-0.042
86 2	2,477.010	2,475.640	-1.368	-0.055
86 3	2,487.000	2,485.660	-1.338	-0.054
86 4	2,500.100	2,499.130	-0.969	-0.039
87 1	2,512.040	2,511.510	-0.535	-0.021
87 2	2,523.870	2,522.390	-1.480	-0.059
87 3	2,535.080	2,532.230	-2.850	-0.113
87 4	2,548.450	2,542.420	-6.034	-0.237

The dollar depreciation impact on the Virginia overall unemployment rate is negligible (Table 3) in 1986, 4th quarter (5.132 vs. 5.125). By 1987 4th quarter, dollar depreciation is projected to slice only about one-tenth of a percent (5.065 vs. 4.972) off the overall rate in Virginia. Although nonmanufacturing loses more than manufacturing gains, the weight of manufacturing gains impact unemployment more heavily. Some of the nonmanufacturing unemployment is among dual job holders and seasonal workers. Also, rapid growth of employment in nonmanufacturing tempers the impact of job losses in this sector on the overall unemployment rate.

Table 3
Virginia Unemployment Rate
(Percent)

Yr./Qtr.	Standard Forecast	Dollar Depreciation	Actual Difference	Percent Difference
85 1	5.153	5.153	0.000	0.000
85 2	5.347	5.347	0.000	0.000
85 3	5.720	5.720	0.000	0.000
85 4	5.174	5.174	0.000	0.000
86 1	5.438	5.449	0.011	0.194
86 2	5.418	5.423	0.005	0.097
86 3	5.241	5.241	0.000	0.000
86 4	5.132	5.125	-0.007	-0.137
87 1	5.155	5.136	-0.019	-0.367
87 2	5.065	5.039	-0.026	-0.526
87 3	5.051	4.995	-0.056	-1.127
87 4	5.065	4.972	-0.093	-1.872

Gains and loses in employment by sector resulting from dollar depreciation are summarized in Table 4.

Of the 6,034 job decline by 1987 4th quarter, Trade (Table 5) loses the most - 4,910, largely due to the reduction in import sales which pass through trade channels. In order of magnitude, 1,642 are lost in transportation (Table 6), 988 in Government (Table 7), 786 in Construction (Table 8) and 100 in Mining (Table 9). Together, this group loses 8,426 jobs.

Gaining jobs along with the 1,463 in manufacturing are services - plus 544 (Table 10) and Finance, Insurance and Real Estate - plus 391 (Table 11). Together this group gains 935 jobs. The other employment category loses 6 jobs.

By 1987 4th quarter, non-manufacturing has lost 7,497 (Table 12) compared with manufacturing's gain of 1,463 (Table 1) resulting in a net loss of 6,034 jobs.

Table 4

Employment Category	Gain(Loss) Jobs (In Thousands)
	1987 4th Qtr.
- Trade	(4.910)
- Transportation	(1.642)
- Government	(.988)
- Construction	(.786)
- Mining	(.100)
Sub Total	(8.426)
- Services	.544
- Fin, Ins, & RE.	.391
Sub Total	(7.491)
- Other Employment	(.006)
Total - Nonmanufacturing	(7.497)
Manufacturing	1.463
TOTAL - Employment	(6.034)

Table 5: Trade Employment
(In Thousands)

Yr./Qtr.	Standard Forecast	Dollar Depreciation	Actual Difference	Percent Difference
85 1	537.236	537.236	0.000	0.000
85 2	538.544	538.544	0.000	0.000
85 3	538.303	538.303	0.000	0.000
85 4	555.084	555.083	0.001	0.000
86 1	557.259	556.764	-0.495	-0.089
86 2	561.704	561.055	-0.649	-0.116
86 3	566.011	565.265	-0.747	-0.132
86 4	571.150	570.435	-0.715	-0.125
87 1	575.777	574.866	-0.910	-0.158
87 2	579.815	578.065	-1.750	-0.303
87 3	583.194	580.250	-2.943	-0.507
87 4	587.492	582.582	-4.910	-0.843

Table 6: Virginia Transportation Employment
(In Thousands)

Yr./Qtr.	Standard Forecast	Dollar Depreciation	Actual Difference	Percent Difference
85 1	131.129	131.129	0.000	0.000
85 2	130.135	130.135	0.000	0.000
85 3	131.090	131.090	0.000	0.000
85 4	131.874	131.874	0.000	0.000
86 1	132.803	132.759	-0.045	-0.034
86 2	133.657	133.557	-0.100	-0.075
86 3	134.241	134.072	-0.169	-0.126
86 4	134.636	134.411	-0.226	-0.168
87 1	135.079	134.725	-0.354	-0.263
87 2	135.721	135.088	-0.633	-0.469
87 3	136.309	135.246	-1.063	-0.786
87 4	136.949	135.307	-1.642	-1.213

Table 7: Virginia Government Employment
(In Thousands)

Yr./Qtr.	Standard Forecast	Dollar Depreciation	Actual Difference	Percent Difference
85 1	517.114	517.114	0.000	0.000
85 2	518.417	518.417	0.000	0.000
85 3	514.383	514.383	0.000	0.000
85 4	523.493	523.493	0.000	0.000
86 1	522.544	522.516	-0.029	-0.005
86 2	522.338	522.268	-0.070	-0.013
86 3	522.010	521.873	-0.137	-0.026
86 4	523.575	523.361	-0.214	-0.041
87 1	523.866	523.574	-0.292	-0.056
87 2	524.122	523.703	-0.419	-0.080
87 3	525.130	524.503	-0.628	-0.120
87 4	526.466	525.479	-0.988	-0.188

Table 8: Virginia Construction Employment
(In Thousands)

Yr./Qtr.	Standard Forecast	Dollar Depreciation	Actual Difference	Percent Difference
85 1	146.456	146.456	0.000	0.000
85 2	146.792	146.792	0.000	0.000
85 3	147.293	147.293	0.000	0.000
85 4	149.227	149.227	0.000	0.000
86 1	149.110	149.075	-0.034	-0.023
86 2	149.679	149.593	-0.085	-0.057
86 3	149.977	149.831	-0.146	-0.098
86 4	149.856	149.650	-0.206	-0.137
87 1	150.238	150.001	-0.237	-0.158
87 2	150.537	150.223	-0.314	-0.209
87 3	151.389	150.916	-0.473	-0.314
87 4	152.121	151.335	-0.786	-0.519

Table 9: Virginia Mining Employment
(In Thousands)

Yr./Qtr.	Standard Forecast	Dollar Depreciation	Actual Difference	Percent Difference
85 1	17.565	17.565	0.000	0.000
85 2	17.559	17.559	0.000	0.000
85 3	17.028	17.028	0.000	0.000
85 4	17.032	17.032	0.000	0.000
86 1	17.179	17.179	-.0001	0.000
86 2	17.346	17.341	-0.005	-0.029
86 3	17.420	17.401	-0.019	-0.111
86 4	17.644	17.598	-0.046	-0.259
87 1	17.615	17.536	-0.078	-0.447
87 2	17.486	17.379	-0.108	-0.619
87 3	17.436	17.312	-0.124	-0.717
87 4	17.444	17.323	-0.121	-0.696

Table 10: Virginia Services Employment
(In Thousands)

Yr./Qtr.	Standard Forecast	Dollar Depreciation	Actual Difference	Percent Difference
85 1	511.119	511.119	0.000	0.000
85 2	516.051	516.051	0.000	0.000
85 3	520.481	520.481	0.000	0.000
85 4	538.029	538.029	0.000	0.000
86 1	542.310	542.283	-0.027	-0.005
86 2	546.801	546.732	-0.069	-0.013
86 3	551.467	551.548	0.081	0.015
86 4	556.211	556.450	0.239	0.043
87 1	560.734	561.440	0.706	0.126
87 2	565.135	565.999	0.864	0.153
87 3	569.027	569.975	0.948	0.166
87 4	573.217	573.761	0.544	0.095

Table 11: Virginia Finance, Insurance and
Real Estate Employment
(In Thousands)

Yr./Qtr.	Standard Forecast	Dollar Depreciation	Actual Difference	Percent Difference
85 1	120.114	120.114	0.000	0.000
85 2	120.343	120.343	0.000	0.000
85 3	122.139	122.139	0.000	0.000
85 4	124.322	124.322	0.000	0.000
86 1	125.227	125.227	0.000	0.000
86 2	125.434	125.434	0.000	0.000
86 3	125.484	125.516	0.032	0.026
86 4	125.696	125.759	0.064	0.051
87 1	126.008	126.170	0.162	0.128
87 2	126.541	126.767	0.226	0.178
87 3	127.196	127.522	0.326	0.255
87 4	127.925	128.316	0.391	0.305

Table 12: Virginia Non-Manufacturing Employment
(In Thousands)

Yr./Qtr.	Standard Forecast	Dollar Depreciation	Actual Difference	Percent Difference
85 1	1,980.730	1,980.730	0.000	0.000
85 2	1,987.840	1,987.840	0.000	0.000
85 3	1,990.720	1,990.720	0.000	0.000
85 4	2,038.900	2,038.900	0.000	0.000
86 1	2,046.340	2,045.710	-0.628	-0.031
86 2	2,056.890	2,055.910	-0.977	-0.048
86 3	2,066.530	2,065.430	-1.104	-0.053
86 4	2,078.640	2,077.530	-1.105	-0.053
87 1	2,089.240	2,088.240	-1.003	-0.048
87 2	2,099.220	2,097.090	-2.131	-0.102
87 3	2,109.550	2,105.600	-3.951	-0.188
87 4	2,121.480	2,113.980	-7.497	-0.355

Note: The Virginia Chase Econometric Model has not yet been updated to 1985 benchmark levels. The 1985 BLS First Quarter Benchmarks for the employment and unemployment series became available just before press time, and we were able to incorporate them in the Indicator Series. However, benchmark revisions would have the same impact on the standard and dollar depreciation scenarios and since the purpose is to compare differences, the absence of benchmarking does not affect the projected differences.

Conway L. Lackman

EMPLOYMENT IN NONAGRICULTURAL INDUSTRIES IN VIRGINIA
ANNUAL AVERAGES (In Thousands)
Revised To First Quarter 1985 Benchmarks

	1985	1984	Change 1984-1985	% Change 1984-1985
TOTAL NONAGRICULTURAL	2,447.1	2,333.3	+113.8	+ 4.9
MANUFACTURING	423.3	421.3	+ 2.0	+ 0.5
Durable Goods	201.2	196.3	+ 4.9	+ 2.5
Lumber & Wood Products	22.8	22.9	- 0.1	- 0.4
Furniture & Fixtures	24.0	24.0	0.0	0.0
Stone, Clay, & Glass Products	14.6	13.5	+ 1.1	+ 8.2
Primary Metal Industries	10.9	10.9	0.0	0.0
Fabricated Metal Products	19.3	18.7	+ 0.6	+ 3.2
Machinery (except Electrical)	15.9	15.3	+ 0.6	+ 3.9
Electric & Electronic Equipment	42.9	41.9	+ 1.0	+ 2.4
Transportation Equipment	43.7	42.2	+ 1.5	+ 3.6
Instruments & Related Products	3.8	3.7	+ 0.1	+ 2.7
Misc. Manufacturing Industries	3.2	3.3	- 0.1	- 3.0
Nondurable Goods	222.1	224.9	- 2.8	- 1.3
Food & Kindred Products	38.3	38.8	- 0.5	- 1.3
Tobacco Manufactures	15.3	15.9	- 0.6	- 3.8
Textile Mill Products	42.4	43.6	- 1.2	- 2.8
Apparel & Other Textile Products	30.7	32.3	- 1.6	- 5.0
Paper	15.9	15.6	+ 0.3	+ 1.9
Printing & Publishing	29.7	27.9	+ 1.8	+ 6.5
Chemicals & Allied Products	31.4	32.6	- 1.2	- 0.4
Petroleum, Rubber & Misc. Plastics Products	15.5	14.9	+ 0.6	+ 4.0
Leather & Leather Products	2.9	3.3	- 0.4	-12.1
MINING	17.3	18.3	- 1.0	- 5.5
CONSTRUCTION	151.3	132.8	+ 18.5	+13.9
TRANSPORTATION & PUBLIC UTILITIES	131.8	127.2	+ 4.6	+ 3.6
Railroad Transportation	12.1	13.3	- 1.2	- 9.0
Trucking & Warehousing	30.7	29.2	+ 1.5	+ 5.1
Transportation by Air	16.5	15.0	+ 1.5	+10.0
Communication	38.2	36.0	+ 2.2	+ 6.1
Electric, Gas, & Sanitary Services	19.7	19.4	+ 0.3	+ 1.6
WHOLESALE & RETAIL TRADE	545.2	516.5	+ 28.7	+ 5.6
Wholesale Trade	117.6	116.1	+ 1.5	+ 1.3
Retail Trade	427.5	400.4	+ 27.1	+ 6.8
FINANCE, INSURANCE, & REAL ESTATE	122.9	117.1	+ 5.8	+ 5.0
Banking	33.4	33.6	- 0.2	- 0.6
Insurance Carriers	22.1	21.4	+ 0.7	+ 3.3
Real Estate	31.2	29.5	+ 1.7	+ 5.8
SERVICES	537.6	495.1	+ 42.5	+ 8.6
Personal Services	29.6	28.1	+ 1.5	+ 5.3
Business Services	138.2	120.5	+ 17.7	+14.7
Health Services	126.5	122.5	+ 4.0	+ 3.3
GOVERNMENT	517.6	505.0	+ 12.6	+ 2.5
Federal Government	168.1	166.0	+ 2.1	+ 1.3
State & Local Government	349.5	339.0	+ 10.5	+ 3.1

HISTORICAL SUMMARY

Performance of Indicators Over the Business Cycle

GENERAL INFORMATION

For those interested in studying the business cycle in Virginia, this publication includes several of the economic time series for which data is readily available on a monthly basis. From time to time, new series will be added and, if necessary, others presently included will be discontinued.

BUSINESS CYCLE TURNING POINTS

The shaded spaces on the charts represent the 1973-75, 1980, and 1981-82 recessions as designated by the National Bureau of Economic Research (NBER). The beginning of a recession is defined as the month when aggregate economic activity in the U. S. reaches a cyclical high, from which it begins to turn down, and the end as the month when it reaches a cyclical low, from which it begins to turn up. According to NBER, the 1973-75 recession began in November 1973 and ended in March 1975, the 1980 recession began in January 1980 and ended in July 1980, and the 1981-82 recession began in July 1981 and ended in November 1982.

SEASONAL ADJUSTMENT

To correlate changes in a time series and changes in the business cycle it is desirable

SEASONAL ADJUSTMENT (continued)

to eliminate, insofar as possible, the effect of irrelevant factors from the data comprising the series. All series currently published in Indicators have been adjusted to minimize regular seasonal fluctuations in the data in order to show only activity related to the business cycle.

MONTHS FOR CYCLICAL DOMINANCE (MCD)

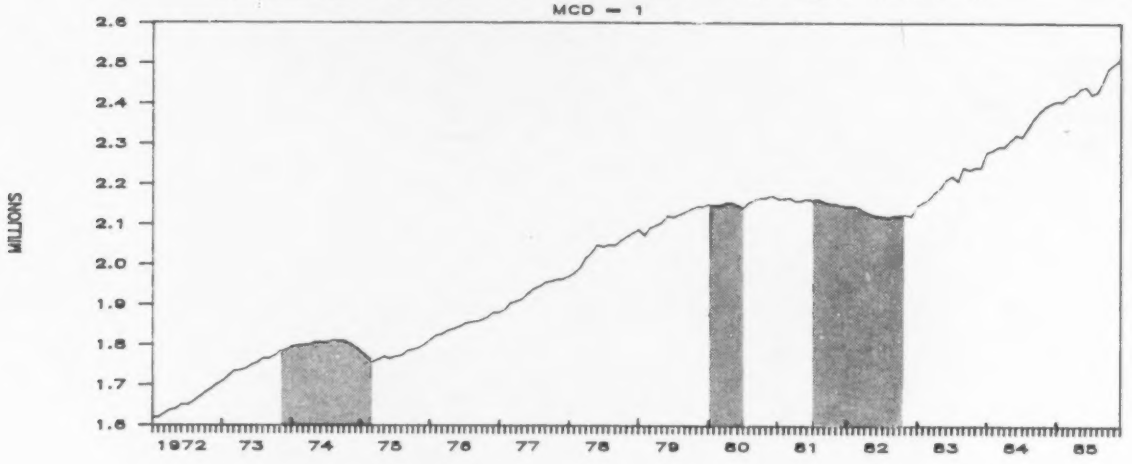
After seasonal adjustment there often remains a significant degree of purely random change, the effect of which can be minimized with a moving average equal in length to the MCD of the series. The MCD is an estimate of the length of the moving average which will reveal the cyclical pattern among the welter of random fluctuations in the data--the greater the MCD the more random and less cyclically significant are monthly changes in the series. Where noted, charts of historical data in this publication represent seasonally adjusted figures which have been averaged according to the MCD of each series.

DATA SOURCES

Nonagricultural Wage and Salary Employment..... Virginia Employment Commission (VEC)
Manufacturing Employment..... VEC
Total Unemployment Rate..... VEC
Average Weekly initial Claims..... VEC
Insured Unemployment Rate..... VEC
Unemployment Insurance Final Payments..... VEC
Average Manhours..... VEC
Average Hourly Earnings..... VEC
Average Weekly Earnings..... VEC
Average Workweek..... VEC
New Business Incorporations..... Virginia State Corporation Commission
Valuation of Building Permits - 18 Cities..... Local Building Inspectors
New Vehicle Registrations..... Virginia State Division of Motor Vehicles
Electrical Power Sales..... VEPCO, Appalachian Power Co., Delmarva Electric Co., Tennessee Power Company
Taxable Retail Sales..... Virginia State Department of Taxation
Taxable Retail Sales/CPI..... Virginia State Department of Taxation

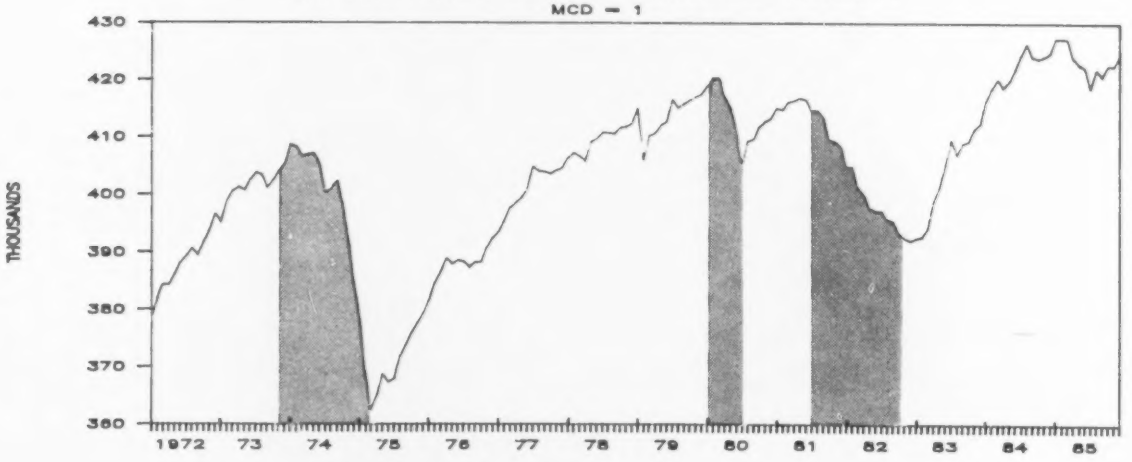
NONAG WAGE & SALARY EMPLOYMENT

MCD – 1



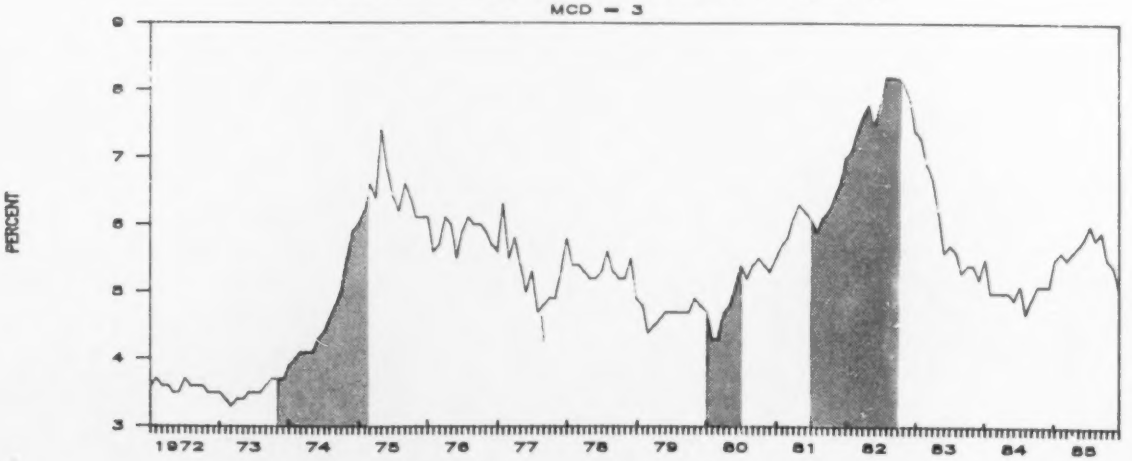
MANUFACTURING EMPLOYMENT

MCD – 1



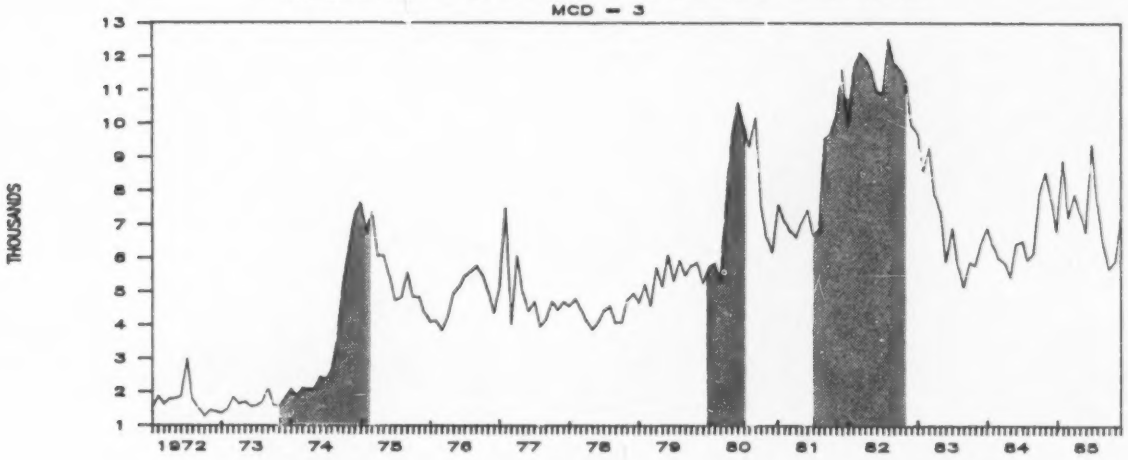
TOTAL UNEMPLOYMENT RATE

MCD – 3



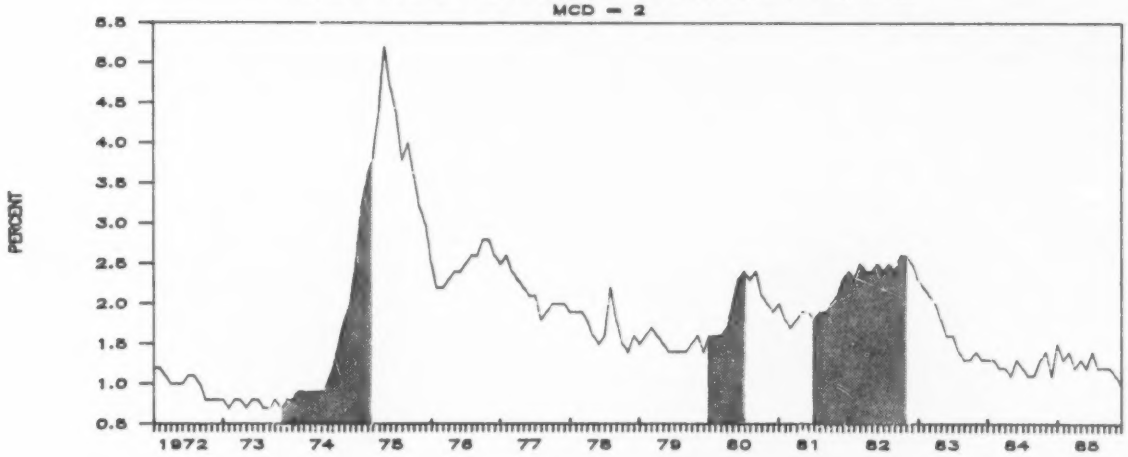
AVERAGE WEEKLY INITIAL CLAIMS

MCD – 3



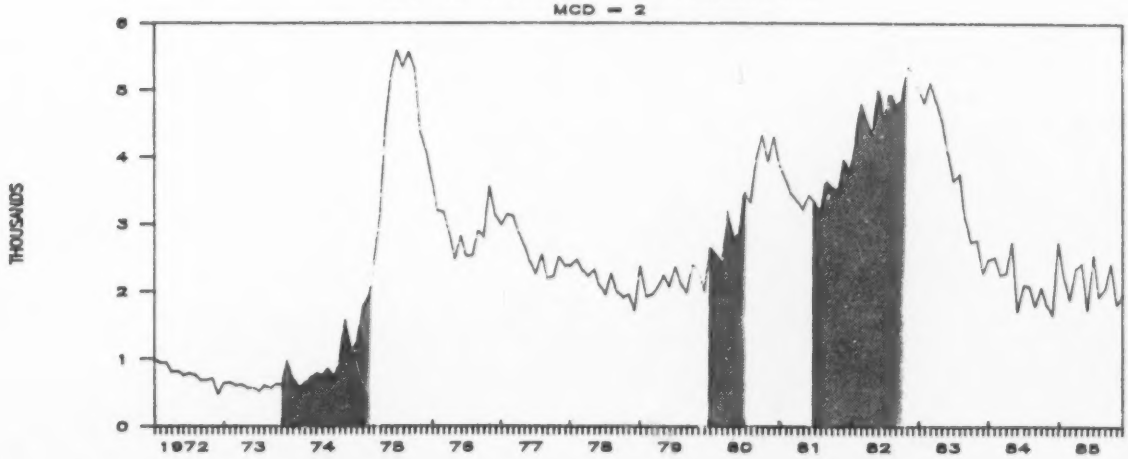
INSURED UNEMPLOYMENT RATE

MCD – 2



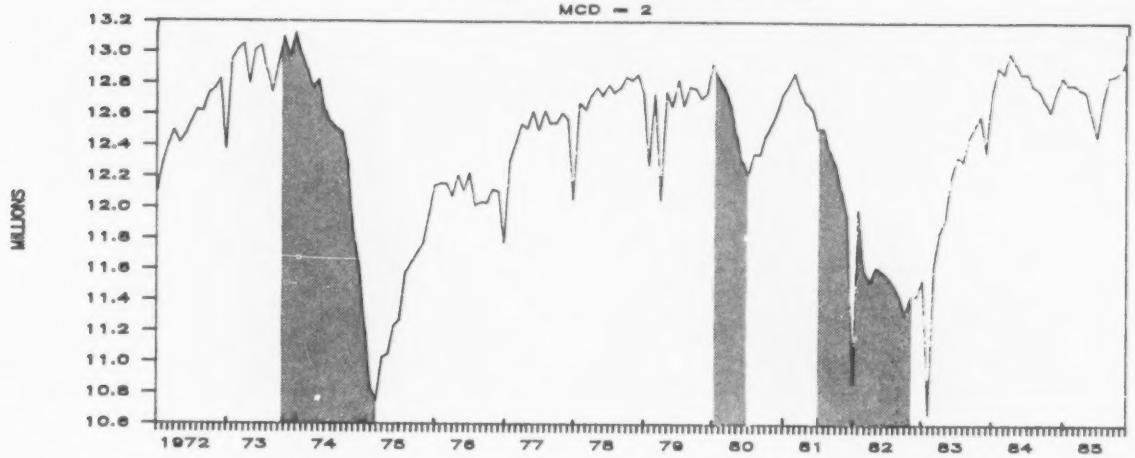
U. I. FINAL PAYMENTS

MCD – 2



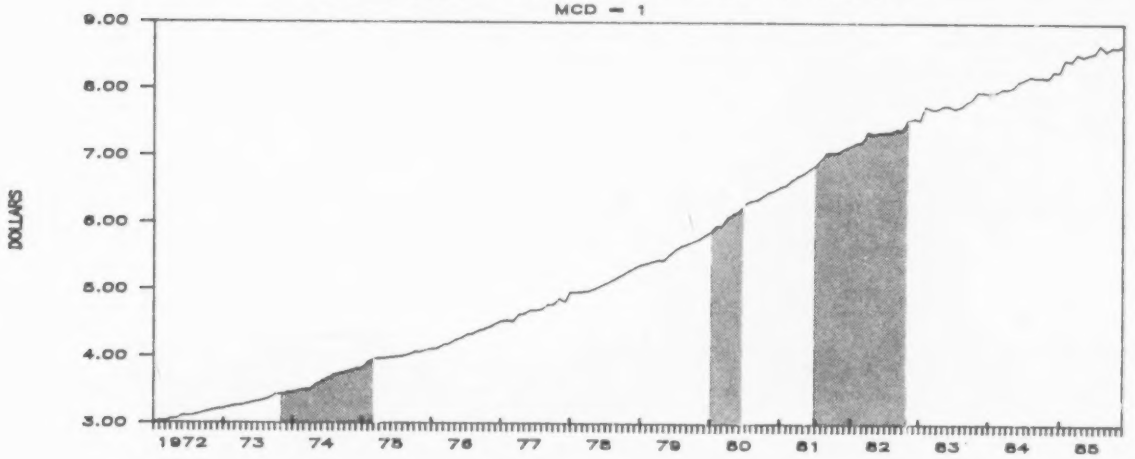
AVERAGE MANHOURS

MCD – 2



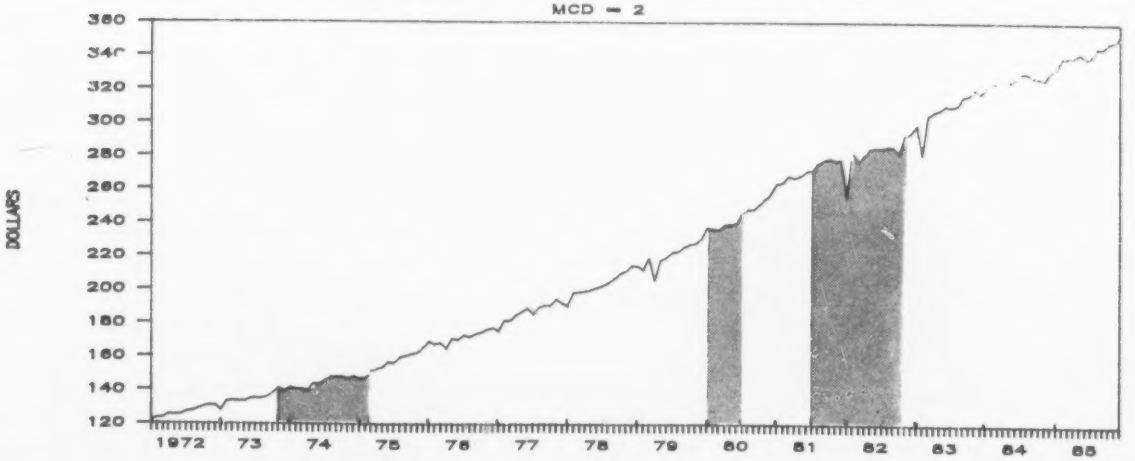
AVERAGE HOURLY EARNINGS

MCD – 1



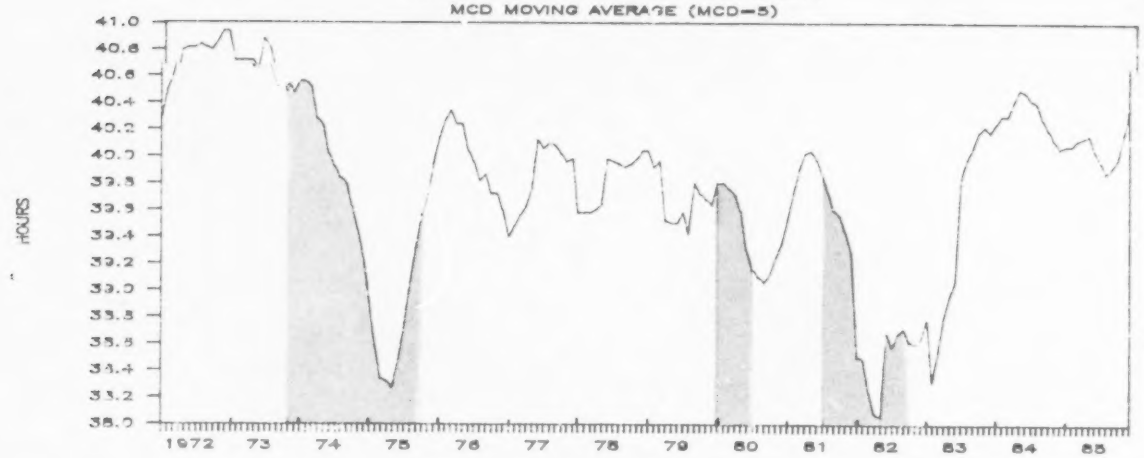
AVERAGE WEEKLY EARNINGS

MCD – 2



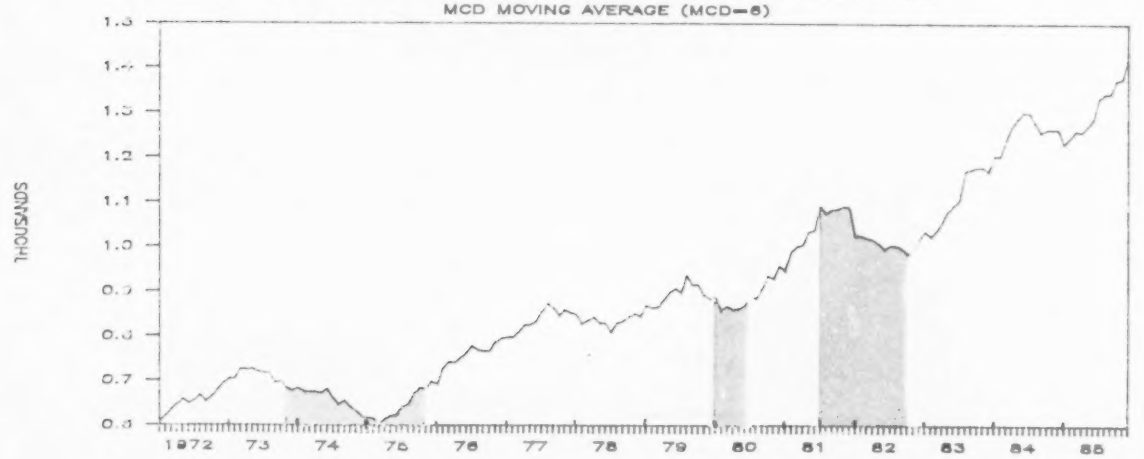
AVERAGE WORKWEEK

MCD MOVING AVERAGE (MCD=5)



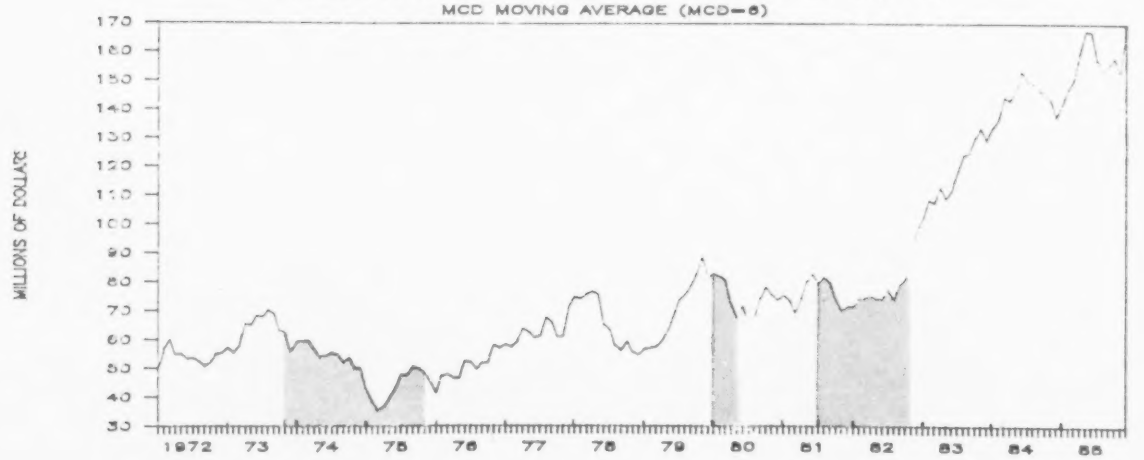
NEW BUSINESS INCORPORATIONS

MCD MOVING AVERAGE (MCD=6)



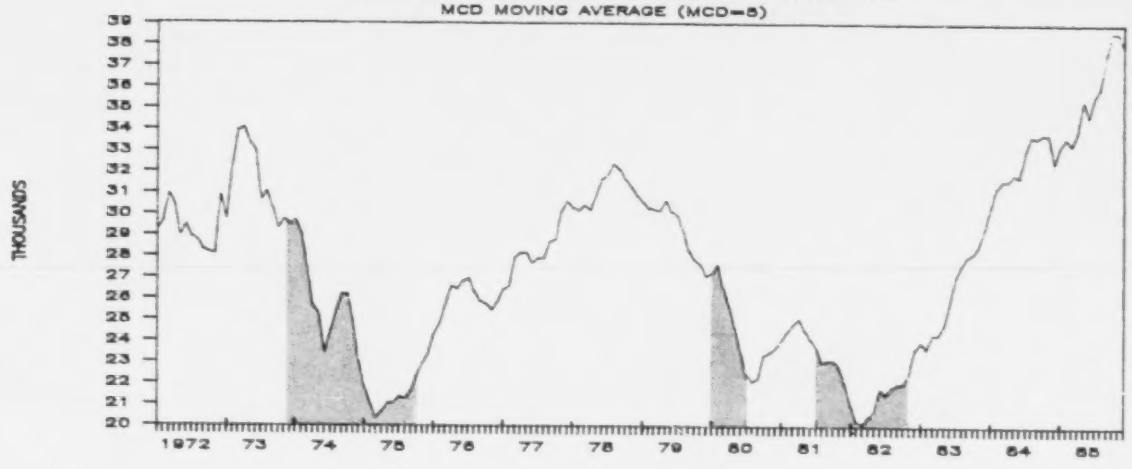
VALUATION OF BUILDING PERMITS

MCD MOVING AVERAGE (MCD=6)



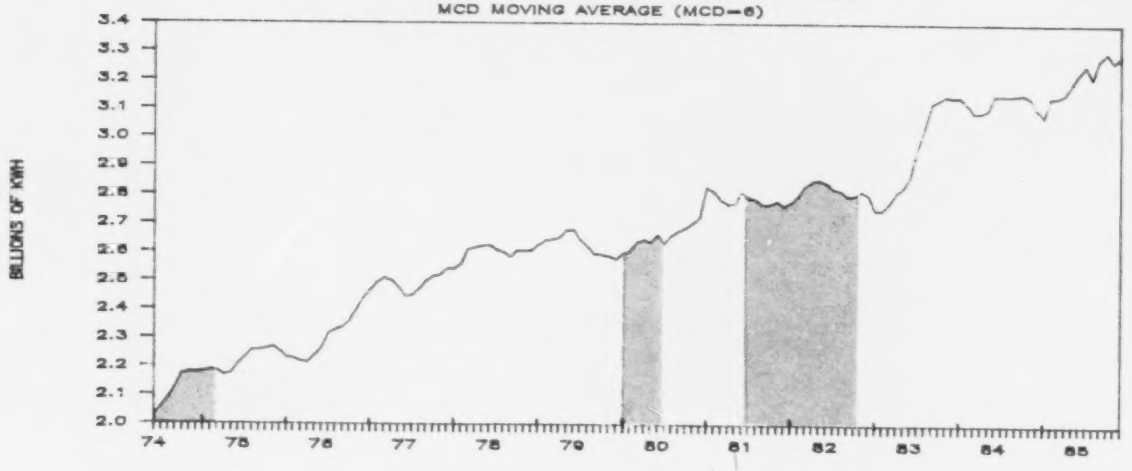
NEW VEHICLE REGISTRATIONS

MCD MOVING AVERAGE (MCD=5)



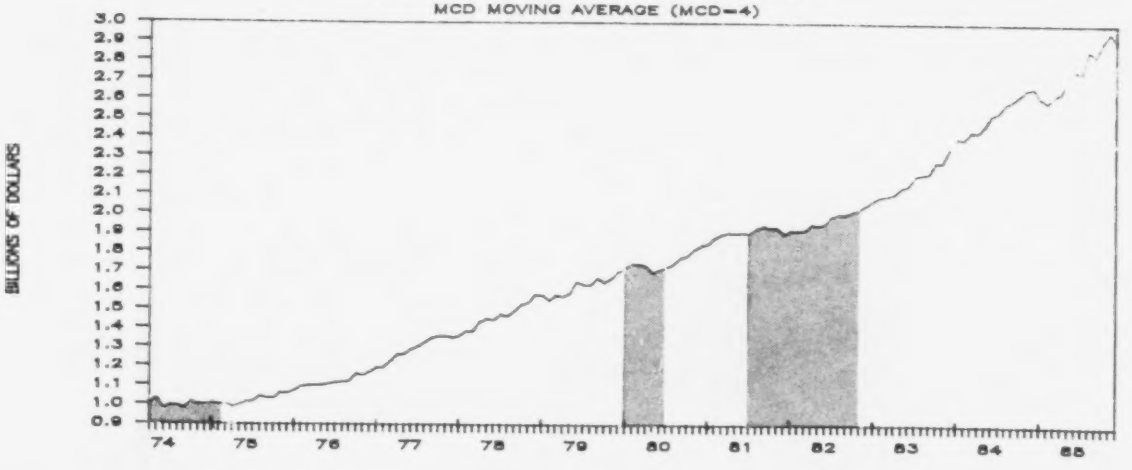
ELECTRICAL POWER SALES

MCD MOVING AVERAGE (MCD=6)



TAXABLE RETAIL SALES

MCD MOVING AVERAGE (MCD=4)



TAXABLE RETAIL SALES/CPI
MCD MOVING AVERAGE (MCD=6)
1967 DOLLARS (MILLIONS)
920
900
880
860
840
820
800
780
760
740
720
700
680
660
640
620
74
75
76
77
78
79
80
81
82
83
84
85

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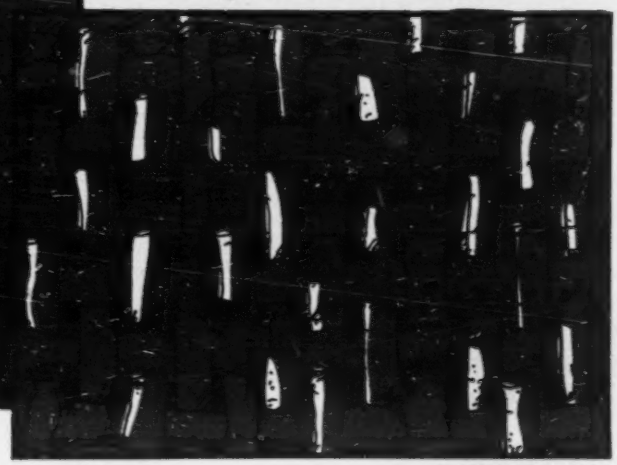
VIRGINIA ECONOMIC INDICATORS

VOL XVIII NO. 1

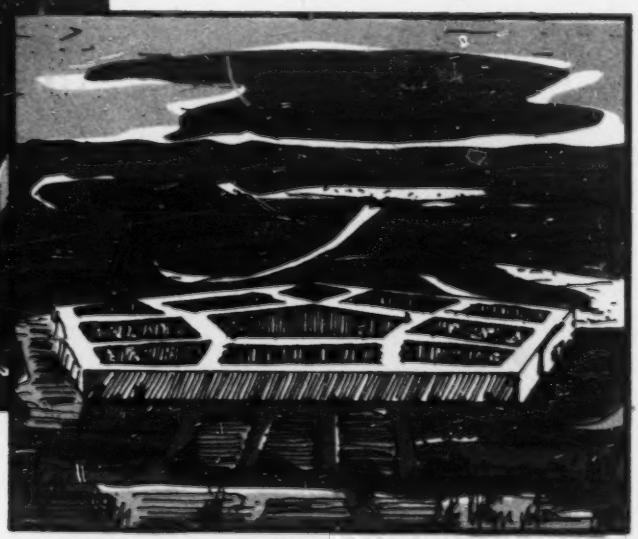
1st QUARTER 1986 DATA

TOURISM



TEXTILES

TOBACCO



GOVERNMENT

Virginia Employment Commission

FOREWORD

This publication is designed to depict the movement of Virginia's key economic indicators in graphic and tabular form with accompanying narrative analysis.

We welcome any comments, suggestions, or questions concerning Virginia Economic Indicators. Please contact the Director, Economic Information Services Division, P. O. Box 1358, Richmond, Virginia 23211, telephone (804) 786-7496, for additional information or explanation of the contents of this document.

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First Quarter Economy Rides Trade Adjustments Into Target Range

The 3.7 percent First Quarter 1986 Real GNP Growth (in 1982 dollars) capitalized on import/export statistical lag adjustments to reach VEC's high forecast target range. This 3.7 percent rate was the highest since the 3.7 percent of First Quarter 1985. The same trade statistics lag that held 1985 Fourth Quarter growth to 0.7 percent boosted this recent quarter.

- Personal income in March rose only half the February rate due to a substantial decline in subsidy payments to farmers, but low inflation and falling oil prices helped consumer spending.
- Consumer spending in March rose 0.3 percent, just 0.1 percent below February, and the savings rate (out of income) held at 4.2 percent--about the same as February, a good sign for later in the year.
- Housing starts held near the 2.0 million level, although slipping to about 1.9 million in March.
- Durable goods orders also slid from a 3-year high in January of $109 billion to $105 billion in March--largely due to the February-March slump in auto sales.
- Industrial production slid slightly from a 4-year January high of 126 to about 125 in March, pushing manufacturing capacity use to under 80 percent.

Absence of signs of imports leveling out and continued flatness of inventories suggest a still too strong dollar, which at 125 against the big 17 currency index, has resisted further decline, suggesting about a $145 billion trade deficit for 1986. Two positive factors persist:

- Somewhat slower but continued monetary ease--M_1 up 7.9 percent, M_2 up 4.4 percent along with two cuts in the federal discount rate to 6.5 percent and in the prime rate to 8.5 percent.
- Continuing drop in oil prices below the $15 level fostering two successive drops (February and March) in consumer prices and a 3.4 percent drop in producer prices.

State Employment Growth Projected At 3.3 Percent

Virginia's economic growth continued at a rapid pace in First Quarter 1986, and a 3.3 percent rate of employment growth is expected for the year. Ninety percent of that growth will be in Virginia's large metro areas (MSAs). The big 4--Northern Virginia, Norfolk, Richmond-Petersburg, and Roanoke--which comprise 67 percent of Virginia's nonagricultural employment will grow more slowly than in 1985. Accordingly, a 1.0 percent drop in the big 4 MSA employment growth rate would shave 2/3 percent off the State's growth rate. Northern Virginia's federal tie will keep growth there above 6.0 percent. Norfolk (3.0 percent - facing shipbuilding peakout and G. E. layoffs) and Roanoke (3.5 percent) will slip from about 5.0 percent while Richmond (bottoming out on tobacco layoffs) will grow about 3.3 percent. Lynchburg (plagued by Falwell and G. E. layoffs) will slip to 3.0 percent from 3.6 percent in 1985, while Charlottesville (2.0 percent) and Danville (0.0 percent) will be slowest.

Just as this issue of Economic Indicators went to press, the Virginia Chase Econometric Model was updated. This new forecast revised nonagricultural employment growth for Virginia for 1986 sharply upward to 4.4 percent. The Chase Virginia Model has become much more optimistic than in the past because of the impact of the currently low interest rates on home building and the combined effects of drastically lower gasoline prices and terrorism abroad on the State's key tourist industry. While 1986 seems to look better and better, Chase may be a little too optimistic at the State level. Gasoline prices and interest rates are probably about as low as they are likely to go, and both may see some firming by summer. A chief driver behind Virginia's 1983-85 expansion was the defense industry. While employment in this key sector is likely to remain at a near record level, not much further expansion is now anticipated. The State's textile, apparel, furniture, and electronics producers should be benefiting from fewer imports thanks to the weaker dollar and impulse buying by consumers with extra change after gasoline purchases, but these employment gains may not offset the fewer new hires anticipated in defense - an industry which recently has added 2,000 Virginia jobs per year. Home building should remain at a record clip through much of the remainder of 1986, but commercial building in some areas is starting to wind down as attested by recent declines in the value of building permits issued. Trade and services should both continue to see growth, but they may be beginning to achieve some economies of scale. In light of the fact that no other recent forecast for Virginia has projected faster than a 3.5 rate of employment growth, time will tell whether or not the above projection of 4.4 percent is overly optimistic for the State in 1986.

HIGHLIGHTS
VIRGINIA ECONOMIC INDICATORS
First Quarter 1986

° In the First Quarter 1986, eight of the Virginia Economic Indicators series set all-time records on a seasonally adjusted basis. Four records were set in January, two in February, and two in March.

- Nonagricultural wage and salary employment reached 2,532,100 in January, after posting new highs throughout Fourth Quarter 1985. Although the February and March levels were slightly below this peak, nonfarm payrolls still ended the quarter 4.4 percent ahead of March 1985.

- Factory employment reached a record 430,300 jobs in February as a weaker U. S. dollar was curbing imports.

- Overtime extended the average production workweek to 41.2 hours in January, the longest recorded since the current indicators series began in 1970.

- Average production manhours worked reached a record 13,248,400 in January.

- Average hourly earnings broke new ground in February, then went on to finish the quarter at an all-time high of $8.78 an hour in March.

- Average weekly earnings posted a new high of $357.50 in January, a gain of $22.06 over the year earlier period.

- Electric power sales set new records throughout First Quarter 1985, soaring to 3,665.2 million kilowatt hours in March.

- Taxable retail sales increased a whopping 45.6 percent in February to a peak of $3,397.2 million. Although slightly lower at $3,208.8 million in March, this was still a very high sales level.

° The total unemployment rate in Virginia averaged 5.4 percent in First Quarter 1986, the same as the 5.4 percent Fourth Quarter 1985 average, but below the 5.5 percent First Quarter 1985 average. The decline of the value of the U. S. dollar on the world market was helping domestic manufacturers be more competitive against imports.

° Unemployment insurance final payments fell to 1,840 in March, the lowest level in fifteen months, since December 1984. This decline in the number of claimants staying in the program long enough to exhaust benefits showed the strength of the current Virginia job market.

° The Virginia Association of Realtors reported that new and existing home sales were up 33 percent in March, and 30 percent for the whole first quarter, compared to the same period in 1985.

° Nationally, sales of new single-family houses were up more than 27 percent in March to an annual rate of 907,000 units. This was the highest monthly sales rate since the government began keeping records in 1963.

° Productivity in the nation's nonfarm business sector increased at a seasonally adjusted rate of 3.4 percent in First Quarter 1986, the largest increase in 2 years according to the U. S. Bureau of Labor Statistics.

° Declining energy prices lowered inflation in First Quarter 1986. The CPI for All Urban Consumers averaged 327.3 (1967=100) for the quarter, only 3.1 percent higher than First Quarter 1985. This compared to a 3.6 percent first quarter to first quarter rise between 1984 and 1985.

° Virginia's coal production at 11,810,000 short tons in First Quarter 1986 was 5.8 percent above First Quarter 1985, for the third best rate of increase of any Eastern coal producing state. While production continued to rise, mine employment declined 1.8 percent from First Quarter 1985, indicating that mine productivity was on the increase.

VIRGINIA ECONOMIC INDICATORS

VOL. XVIII, NO. 1 FIRST QUARTER DATA

Indicators Make Another Good Showing In First Quarter

The 15 series which measure Virginia's economy still presented a very good showing during 1986's first quarter, but their overall rate of expansion was a little less spectacular than in the fourth quarter, and several indicators were prone to erratic movement for a part of the period. The overall level of economic performance has been so high recently that the indicators seem to be increasingly having difficulty breaking new ground with each new month. Still, eight series--nonfarm employment, factory employment, average weekly hours, average manhours, average hourly earnings, average weekly earnings, electric power sales, and taxable retail sales--set new all-time records at some point in the first quarter. Even with all these record breakers, electric power sales was the only series to be consistently positive all three months of the quarter.

The overall direction of the series was positive each month with March just a little bit stronger than the first two periods because of improvements in the production worker series. January and February each saw eight series up and seven series down. In March, eight series were also positive, but only four were down, and three were unchanged. Of the eight all-time records set this quarter, four were in January, two were in February, and two were in March.

The six-month moving average of the number of rising indicators (page 8) serves to highlight the first quarter's performance. The moving average enhances analysis because it smooths out much of the irregularity present in many of the individual series.

Eight Series Set Records During First Quarter

Nonagricultural employment on a Statewide basis posted an all-time seasonally adjusted high of 2,532,100 in January after also setting records throughout the fourth quarter, lost a small amount of ground in February, and was practically unchanged in March at 2,526,700. For March, nonfarm payrolls were still a healthy 4.4 percent ahead of March 1985. Factory employment advanced in January, set a new all-time record high of 430,300 in February, then settled just below that level in March at 428,100. Less import competition with the weaker U. S. dollar was helping manufacturing.

The four indicators that measure unemployment's impact on the State's economy with the exception of January were generally positive in the first quarter of 1986. The total unemployment rate rose in January, fell in February, then held steady at 5.3 percent in March. Initial claims for jobless benefits were down except for February when they were temporarily increased by wet weather. The insured unemployment rate, benefiting from fewer factory layoffs this year, rose only slightly in January, then returned to the low December level of 1.0 percent for both February and March. Unemployment insurance final payments were up in January, reflecting workers furloughed earlier in 1985 passing out of benefit status, then fell in both February and March, ending the quarter at 1,840, the lowest level in fifteen months.

The overall positive stance of the production worker indicators reflected the generally improved factory situation this year. All four series set new records at some point in the first quarter. Both length of the workweek and average manhours worked set new records for the current 16-year Economic Indicators series in January at 41.2 hours and 13,248,400 manhours, respectively. Both series were off from this mark in February, but then gained back part of the lost ground in March to finish the quarter at relatively high levels. Average hourly earnings were off $.02 in January, then set new records in both February and March, finishing the quarter at a high of $8.78. Average weekly wages posted an all-time record of $357.50 in January, lost ground in February, and then ended the quarter at $356.00 in March, the second highest level ever.

The five business-related indicators remained at generally high levels in the first quarter, but all except electric power sales and retail sales were not able to maintain the record setting pace of the Fourth Quarter 1985. New business incorporations were down from December's record of 1,593 in January, did a little better in February, then were off again by 14.1 percent in March. The volatile valuation of building permits issued climbed to an all-time record of $232.3 million in December as a large number of projects were started to take advantage of year-end tax credits. This indicator then dropped 11.6 percent in January and fell 30.3 percent to $143.0 million in February, before rising 2.9 percent to $147.2 million in March. New vehicle registrations at 42,262 in January were second only to last October's all-time record of 44,066 as motor manufacturers once again offered financing incentives to buyers, but new registrations fell off by 14.0 percent in February and 3.5 percent in March. Financing incentives were less widespread after mid-February, and the car market had apparently become saturated by record sales throughout much of 1985. More normal winter temperatures, after a mild fall and a mild winter the year before, helped electric power sales to increase each month of the first quarter (the only indicator to be positive for all three months), and to establish a new record in March of 3,665.2 million kilowatt hours. Taxable retail sales were off 9.6 percent in January, rebounded a whopping 45.6 percent in February to a record $3,397.2 million, and were off slightly by 5.6 percent in March, but $3,208.8 million was still a very high level.

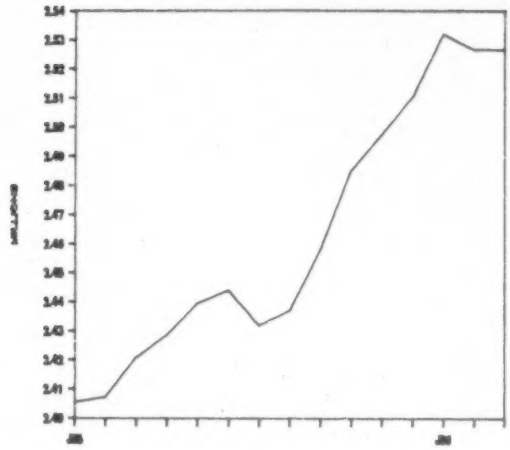
EMPLOYMENT AND UNEMPLOYMENT INDICATORS
January 1985 to March 1986

	Nonagricultural Wage & Salary Emp.* (Thousands)		Manufacturing Employment* (Thousands)		Total Unemployment Rate* (Percent)	
1985	Unadj.	Adj.	Unadj.	Adj.	Unadj.	Adj.
January	2,362.8	2,405.7	422.6	427.4	6.1	5.4
February	2,361.8	2,407.4	422.3	426.2	6.2	5.5
March	2,392.6	2,420.9	422.9	426.1	5.9	5.5
April	2,418.2	2,428.7	421.9	423.8	5.5	5.6
May	2,449.7	2,439.6	421.1	422.7	5.5	5.7
June	2,481.2	2,444.1	423.1	421.3	5.7	5.8
July	2,443.1	2,432.0	417.9	418.7	6.0	6.0
August	2,446.9	2,437.0	423.6	421.8	5.4	5.8
September	2,479.3	2,458.0	426.3	421.6	5.2	5.9
October	2,498.7	2,485.1	426.8	423.1	5.2	5.6
November	2,507.3	2,497.6	425.6	423.1	5.3	5.4
December	2,522.9	2,510.4	425.9	425.1	5.3	5.2
1986						
January	2,486.5	2,532.1	425.0	429.7	6.2	5.5
February	2,478.8	2,526.8	426.4	430.3	6.0	5.3
March	2,496.4	2,526.7	425.1	428.1	5.6	5.3

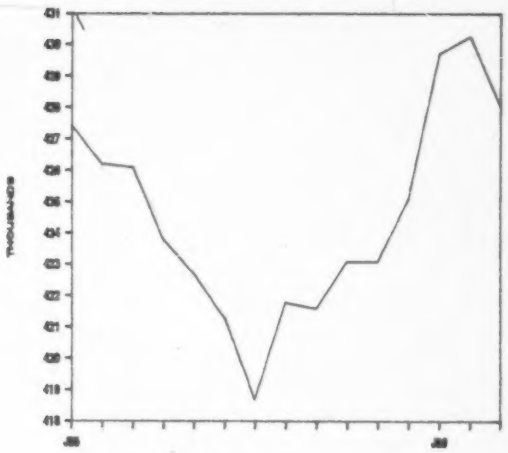
	Average Weekly Initial Claims (Number)		Avg. Wkly. Insured Unemployment Rate (Percent)		U. I. Final Payments (Number)	
1985	Unadj.	Adj.	Unadj.	Adj.	Unadj.	Adj.
January	12,108	7,281	2.2	1.5	2,613	2,751
February	8,996	8,523	1.8	1.3	2,052	2,137
March	6,752	7,203	1.7	1.3	2,374	1,921
April	6,767	7,845	1.2	1.2	3,117	2,244
May	5,475	7,555	1.1	1.3	2,680	2,289
June	5,869	7,322	1.0	1.2	2,019	1,947
July	8,538	8,875	1.2	1.4	2,571	2,492
August	5,249	7,526	1.0	1.3	1,845	1,963
September	4,344	6,777	0.9	1.2	1,630	2,142
October	5,002	5,828	0.9	1.2	1,862	2,364
November	6,100	6,087	1.0	1.1	1,557	1,944
December	11,965	6,644	1.1	1.0	1,836	2,004
1986						
January	8,597	5,179	1.6	1.1	2,439	2,549
February	6,258	5,926	1.4	1.0	1,888	1,961
March	5,133	5,466	1.3	1.0	2,276	1,840

*These series have been adjusted to First Quarter 1985 benchmarks.

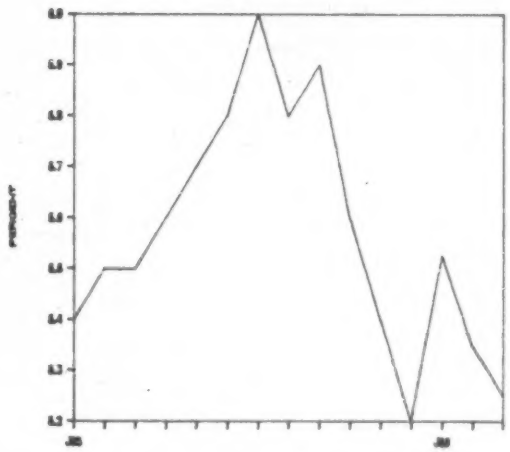
NONAG W & S EMPLOYMENT



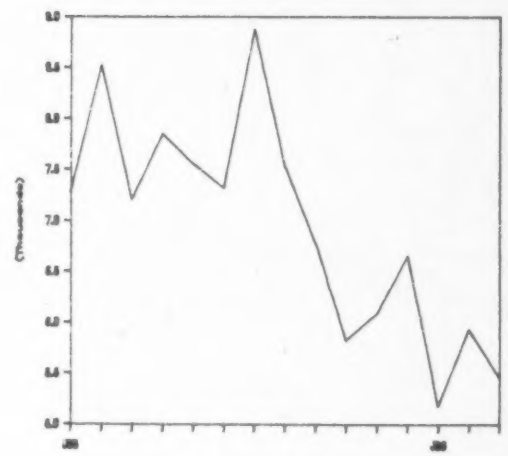
MANUFACTURING EMPLOYMENT



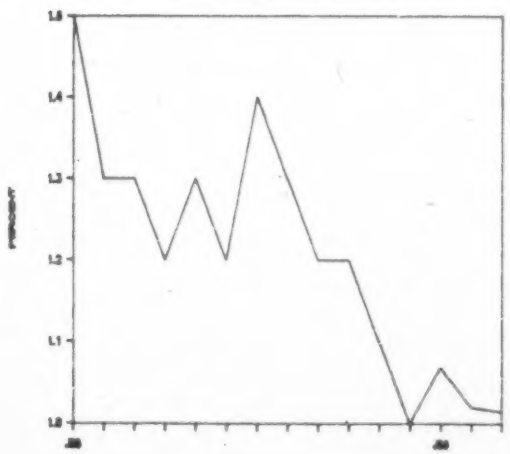
TOTAL UNEMPLOYMENT RATE



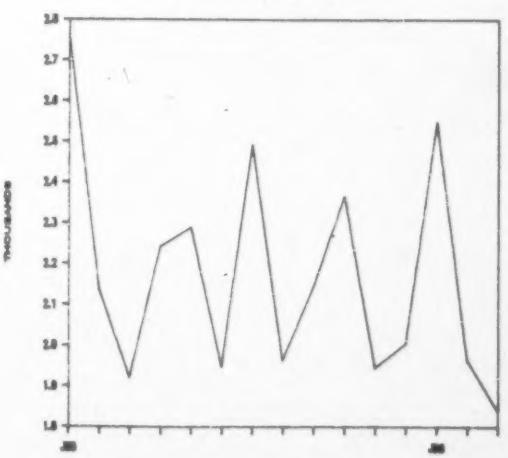
AVG. WEEKLY INIT. CLAIMS



INSURED UNEMPLOYMENT RATE



U. I. FINAL PAYMENTS



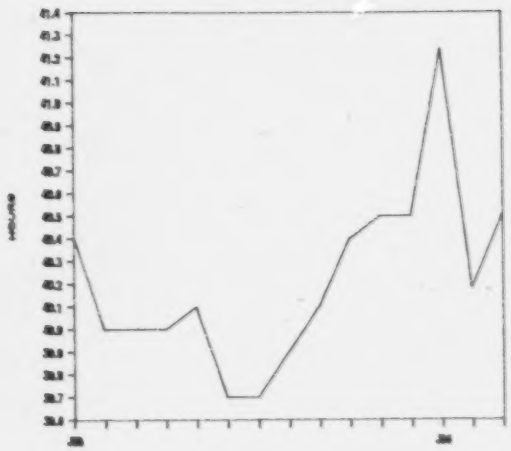
MANUFACTURING PRODUCTION WORKER INDICATORS
January 1985 to March 1986

	Average Weekly Hours* (Hours)		Average Manhours* (Thousands)	
1985	Unadj.	Adj.	Unadj.	Adj.
January	39.7	40.4	12,613.4	12,939.7
February	39.3	40.0	12,432.1	12,757.6
March	39.6	40.0	12,551.1	12,774.8
April	39.6	40.0	12,508.8	12,697.9
May	40.1	40.1	12,635.0	12,693.0
June	40.2	39.7	12,763.6	12,566.0
July	39.6	39.7	12,408.0	12,480.6
August	40.0	39.9	12,718.8	12,650.7
September	40.4	40.1	12,969.5	12,716.1
October	40.5	40.4	12,994.1	12,836.0
November	41.0	40.5	13,112.2	12,858.5
December	41.2	40.5	13,152.4	12,917.0
1986				
January	40.5	41.2	12,903.9	13,248.4
February	39.5	40.2	12,658.7	12,996.6
March	40.1	40.5	12,830.7	13,065.9

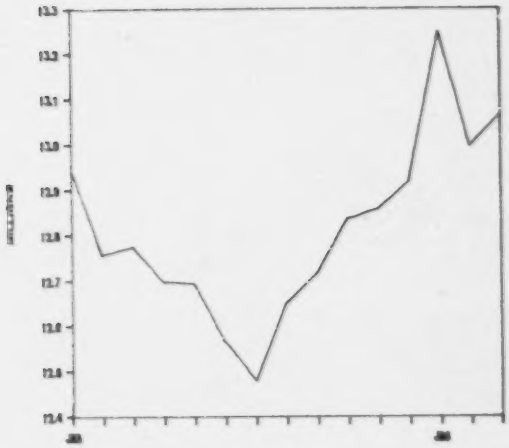
	Average Hourly Earnings* (Dollars)		Average Weekly Earnings* (Dollars)	
1985	Unadj.	Adj.	Unadj.	Adj.
January	8.36	8.28	331.89	335.44
February	8.42	8.40	330.91	335.81
March	8.42	8.42	333.43	337.08
April	8.49	8.48	336.20	337.83
May	8.43	8.45	338.04	338.89
June	8.46	8.49	340.09	337.38
July	8.50	8.53	336.60	338.82
August	8.57	8.61	342.80	343.18
September	8.56	8.59	345.82	344.29
October	8.59	8.64	347.90	348.57
November	8.66	8.64	355.06	348.72
December	8.71	8.67	358.85	351.74
1986				
January	8.73	8.65	353.57	357.50
February	8.76	8.73	346.02	351.29
March	8.78	8.78	352.08	356.00

*These series have been adjusted to First Quarter 1985 benchmarks.

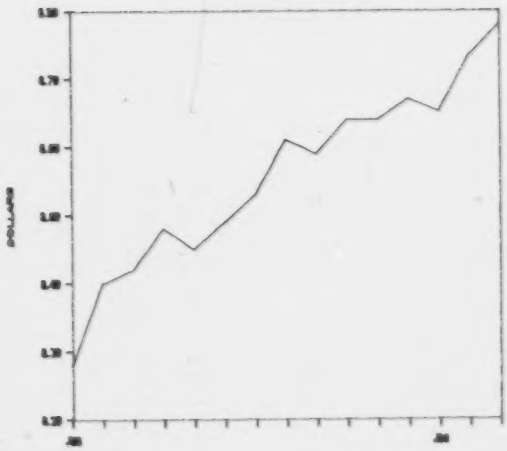
AVERAGE WEEKLY HOURS



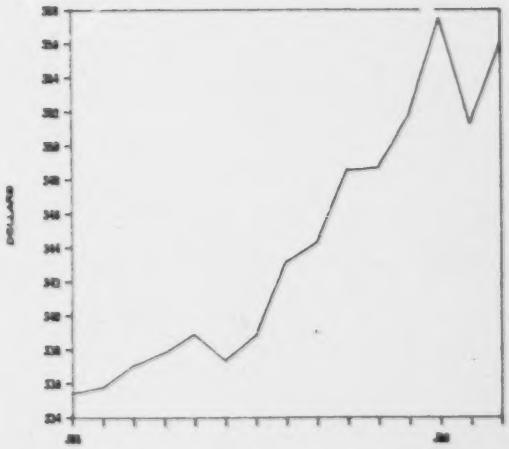
AVERAGE MANHOURS



AVERAGE HOURLY EARNINGS



AVERAGE WEEKLY EARNINGS

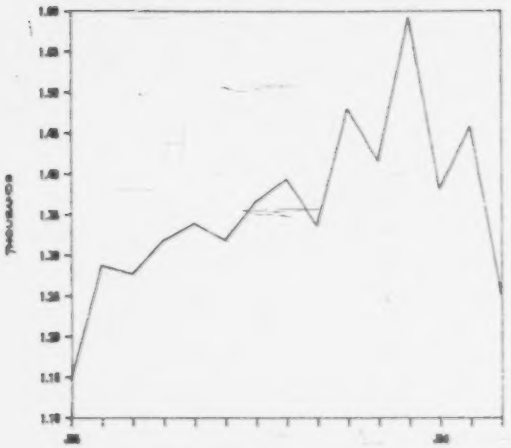


BUSINESS INDICATORS
January 1985 to March 1986

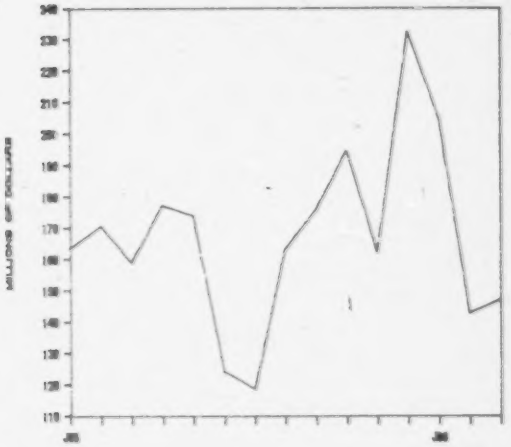
	New Business Incorporations (Number)		Valuation of Bldg. Permits ($ Millions)		New Vehicle Registrations (Number)	
1985	Unadj.	Adj.	Unadj.	Adj.	Unadj.	Adj.
January	1,154	1,148	139.1	163.7	33,530	35,998
February	1,294	1,288	139.8	170.6	29,072	33,279
March	1,424	1,277	195.6	159.0	38,164	33,795
April	1,447	1,319	204.4	177.2	39,165	35,073
May	1,380	1,340	166.0	174.0	42,505	37,754
June	1,348	1,319	149.5	124.1	40,170	34,296
July	1,315	1,367	133.7	118.7	41,215	37,447
August	1,445	1,395	165.0	163.1	37,532	35,570
September	1,212	1,338	166.0	175.8	41,423	40,942
October	1,455	1,481	198.5	194.5	40,354	44,066
November	1,254	1,417	154.4	162.4	29,286	34,655
December	1,508	1,593	167.1	232.3	25,460	35,299
1986						
January	1,391	1,383	175.3	205.3	39,473	42,262
February	1,469	1,459	117.8	143.0	31,677	36,327
March	1,401	1,254	180.3	147.2	39,382	35,069

	Electrical Power Sales (Mil. of KHW)		Taxable Retail Sales ($ Millions)	
1985	Unadj.	Adj.	Uadj.	Adj.
January	3,594.5	3,040.7	2,247.3	2,445.9
February	3,835.0	3,472.8	2,311.6	2,661.8
March	3,186.8	3,193.3	2,599.4	2,817.3
April	2,959.2	3,188.4	2,720.0	2,765.7
May	2,753.3	3,264.7	2,894.6	2,718.2
June	3,059.5	3,232.8	2,739.5	2,764.0
July	3,400.3	3,166.2	2,797.3	2,794.0
August	3,563.5	3,199.0	3,133.0	3,205.5
September	3,626.9	3,378.7	2,750.8	2,741.2
October	2,892.8	3,328.9	3,027.4	2,991.4
November	2,769.9	3,203.3	3,031.9	2,999.2
December	3,403.8	3,408.3	3,214.4	2,579.3
1986				
January	4,062.3	3,439.7	2,144.1	2,333.1
February	3,851.7	3,492.0	2,942.0	3,397.2
March	3,654.2	3,665.2	2,958.5	3,208.8

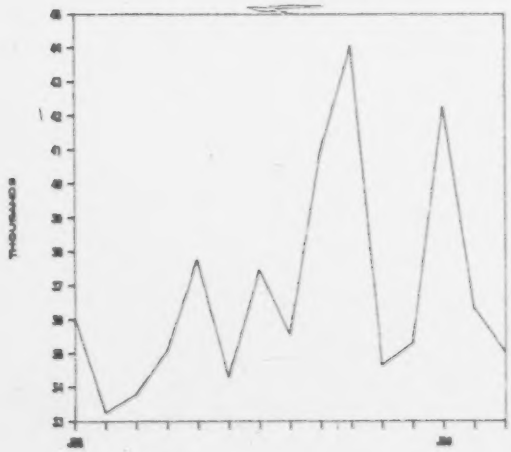
NEW BUSINESS INCORPORATIONS



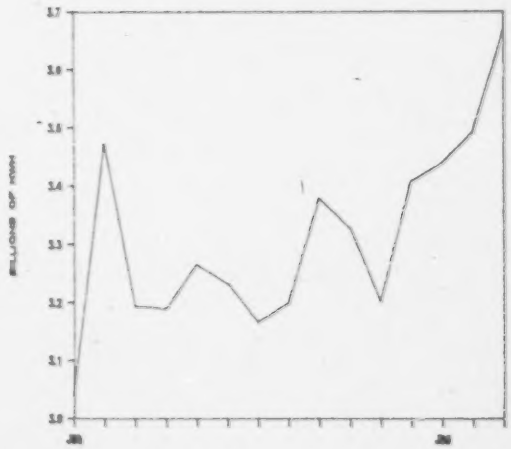
VALUATION OF BUILDING PERMITS



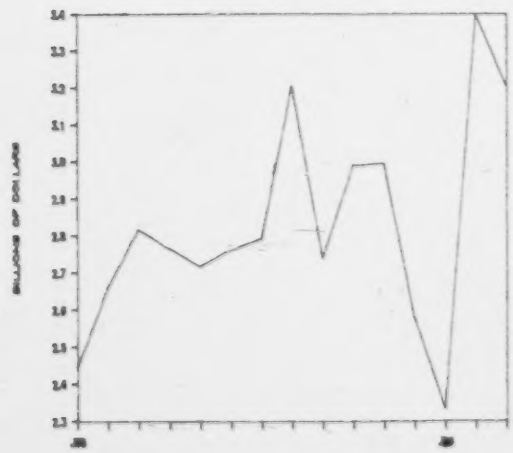
NEW VEHICLE REGISTRATIONS



ELECTRICAL POWER SALES



TAXABLE RETAIL SALES

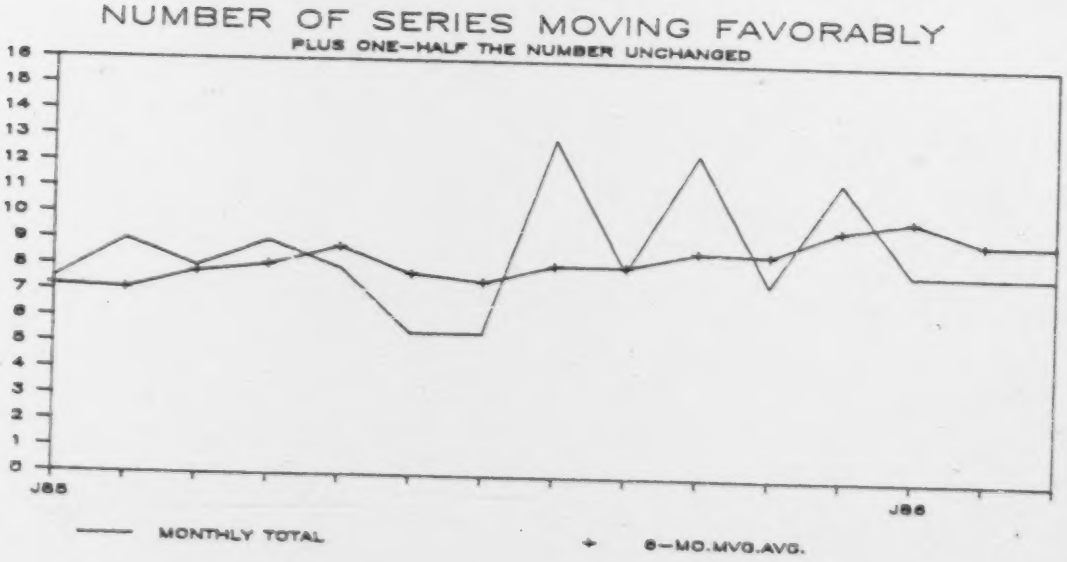


DATA SUMMARY MARCH 1986 (SEASONALLY ADJUSTED DATA)	Mar. 1986	Feb. 1986	Mar. 1985	Percent & (Direction) of Change 1/ Feb. '86- Mar. '86	 Mar. '85- Mar. '86
EMPLOYMENT					
*Nonagricultural Wage & Salary Employment (000)	2,526.7	2,526.8	2,420.9	0.0 (0)	+ 4.4 (+)
*Manufacturing Employment (000)	428.1	430.3	426.1	- 0.5 (-)	+ 0.5 (+)
UNEMPLOYMENT					
*Total Unemployment Rate (%)	5.3	5.3	5.5	xxx (0)	xxx (+)
Average Weekly Initial Claims	5,466	5,926	7,203	- 7.8 (+)	-24.1 (+)
Average Weekly Insured Unemployment Rate (%)	1.0	1.0	1.3	xxx (0)	xxx (+)
Unemployment Insurance Final Payments	1,840	1,961	1,921	- 6.2 (+)	- 4.2 (+)
MANUFACTURING PRODUCTION WORKERS					
*Average Weekly Hours	40.5	40.2	40.0	+ 0.7 (+)	+ 1.3 (+)
*Average Manhours (000)	13,065.9	12,996.6	12,774.8	+ 0.5 (+)	+ 2.3 (+)
*Average Hourly Earnings ($)	8.78	8.73	8.42	+ 0.6 (+)	+ 4.3 (+)
*Average Weekly Earnings ($)	356.00	351.29	337.08	+ 1.3 (+)	+ 5.6 (+)
BUSINESS					
New Business Incorporations	1,254	1,459	1,277	-14.1 (-)	- 1.8 (-)
Valuation of Building Permits - 18 Cities ($M)	147.2	143.0	159.0	+ 2.9 (+)	- 7.4 (-)
New Vehicle Registrations	35,069	36,327	33,795	- 3.5 (-)	+ 3.8 (+)
Electrical Power Sales (M of KWH)	3,665.2	3,492.0	3,193.3	+ 5.0 (+)	+14.8 (+)
Taxable Retail Sales ($M)	3,208.8	3,397.2	2,817.3	- 5.6 (-)	+13.9 (+)

1/ + = Favorable, - = Not Favorable, 0 = No Change (less than .05%)

* Revised to First Quarter 1985 benchmarks

SUMMARY



DATA SUMMARY FEBRUARY 1986 (SEASONALLY ADJUSTED DATA)	Feb. 1986	Jan. 1986	Feb. 1985	Percent & (Direction) of Change 1/ Jan. '86- Feb. '86	 Feb. '85- Feb. '86
EMPLOYMENT					
*Nonagricultural Wage & Salary Employment (000)	2,526.8	2,532.1	2,407.4	- 0.2 (-)	+ 5.0 (+)
*Manufacturing Employment (000)	430.3	429.7	426.2	+ 0.1 (+)	+ 1.0 (+)
UNEMPLOYMENT					
*Total Unemployment Rate (%)	5.3	5.5	5.5	xxx (+)	xxx (+)
Average Weekly Initial Claims	5,926	5,179	8,523	+14.4 (-)	-30.5 (+)
Average Weekly Insured Unemployment Rate (%)	1.0	1.1	1.3	xxx (+)	xxx (+)
Unemployment Insurance Final Payments	1,961	2,549	2,137	-23.1 (+)	- 8.2 (+)
MANUFACTURING PRODUCTION WORKERS					
*Average Weekly Hours	40.2	41.2	40.0	- 2.4 (-)	+ 0.5 (+)
*Average Manhours (000)	12,996.6	13,248.4	12,757.6	- 1.9 (-)	+ 1.9 (+)
*Average Hourly Earnings ($)	8.73	8.65	8.40	+ 0.9 (+)	+ 3.9 (+)
*Average Weekly Earnings ($)	351.29	357.50	335.81	- 1.7 (-)	+ 4.6 (+)
BUSINESS					
New Business Incorporations	1,459	1,383	1,288	+ 5.5 (+)	+13.3 (+)
Valuation of Building Permits - 18 Cities ($M)	143.0	205.3	170.6	-30.3 (-)	-16.2 (-)
New Vehicle Registrations	36,327	42,262	33,279	-14.0 (-)	+ 9.2 (+)
Electrical Power Sales (M of KWH)	3,492.0	3,439.7	3,472.8	+ 1.5 (+)	+ 0.6 (+)
Taxable Retail Sales ($M)	3,397.2	2,333.1	2,661.8	+45.6 (+)	+27.6 (+)

DATA SUMMARY JANUARY 1986 (SEASONALLY ADJUSTED DATA)	Jan. 1986	Dec. 1985	Jan. 1985	Percent & (Direction) of Change 1/ Dec. '85- Jan. '86	 Jan. '85- Jan. '86
EMPLOYMENT					
*Nonagricultural Wage & Salary Employment (000)	2,532.1	2,510.4	2,405.7	+ 0.9 (+)	+ 5.3 (+)
*Manufacturing Employment (000)	429.7	425.1	427.4	+ 1.1 (+)	+ 0.5 (+)
UNEMPLOYMENT					
*Total Unemployment Rate (%)	5.5	5.2	5.4	xxx (-)	xxx (-)
Average Weekly Initial Claims	5,179	6,644	7,281	-22.1 (+)	-28.9 (+)
Average Weekly Insured Unemployment Rate (%)	1.1	1.0	1.5	xxx (-)	xxx (+)
Unemployment Insurance Final Payments	2,549	2,004	2,751	+27.2 (-)	- 7.3 (+)
MANUFACTURING PRODUCTION WORKERS					
*Average Weekly Hours	41.2	40.5	40.4	+ 1.7 (+)	+ 2.0 (+)
*Average Manhours (000)	13,248.4	12,917.0	12,939.7	+ 2.6 (+)	+ 2.4 (+)
*Average Hourly Earnings ($)	8.65	8.67	8.28	- 0.2 (-)	+ 4.5 (+)
*Average Weekly Earnings ($)	357.50	351.74	335.44	+ 1.6 (+)	+ 6.6 (+)
BUSINESS					
New Business Incorporations	1,383	1,593	1,148	-13.2 (-)	+20.5 (+)
Valuation of Building Permits - 18 Cities ($M)	205.3	232.3	163.7	-11.6 (-)	+25.4 (+)
New Vehicle Registrations	42,262	35,299	35,998	+19.7 (+)	+17.4 (+)
Electrical Power Sales (M of KWH)	3,439.7	3,408.3	3,040.7	+ 0.9 (+)	+13.1 (+)
Taxable Retail Sales ($M)	2,333.1	2,579.3	2,445.9	- 9.6 (-)	- 4.6 (-)

1/ + = Favorable, - = Not Favorable, 0 = No Change (less than .05%)

* Revised to First Quarter 1985 benchmarks

INTERNAL/EXTERNAL BALANCE, REAL SECTOR AND ECONOMIC POLICY OPTIONS FOR 1986-87

by Conway L. Lackman, Ph.D., and Alex B. Valz

I. Introduction

The Reagan administration faces, in our judgment, at least six options in formulating its basic politically feasible economic policy for the 1986-87 period:

A. Rapid monetary ease continued with more substantial budget cuts than to date.

B. Monetary tightness in reverting to capital inflows to stabilize the balance of payments.

C. Moderate monetary ease with modest budget cuts.

D. Trade protectionism with monetary tightness and little if any budget cuts.

E. Dollar depreciation with monetary tightness.

F. Trade protectionism, moderate monetary ease, and budget cuts.

This paper is a summary evaluation of the efficacy of these options in terms of sustaining the recent economic recovery.

II. The Framework for Analysis

The analysis for this article will employ a slight variation of the Mundell international disequilibrium framework where in the post-World War II era, most policy emphasis has been placed on internal balance and full employment as the main goal of public policy.(1) During this period, the attempts of primarily monetary authorities to maintain internal equilibrium and the supply of money through neutralization operations has created an international disequilibrium system (departure from general equilibrium) where there is little or no adjustment mechanism to deal with the balance of payments. In order to understand disequilibrium, let us first establish what constitutes general equilibrium in an open economy.

General equilibrium exists if three conditions are met. These conditions are:

1. The current supply of goods equals the current demand for goods.

2. The community is willing to hold the existing stock of money.

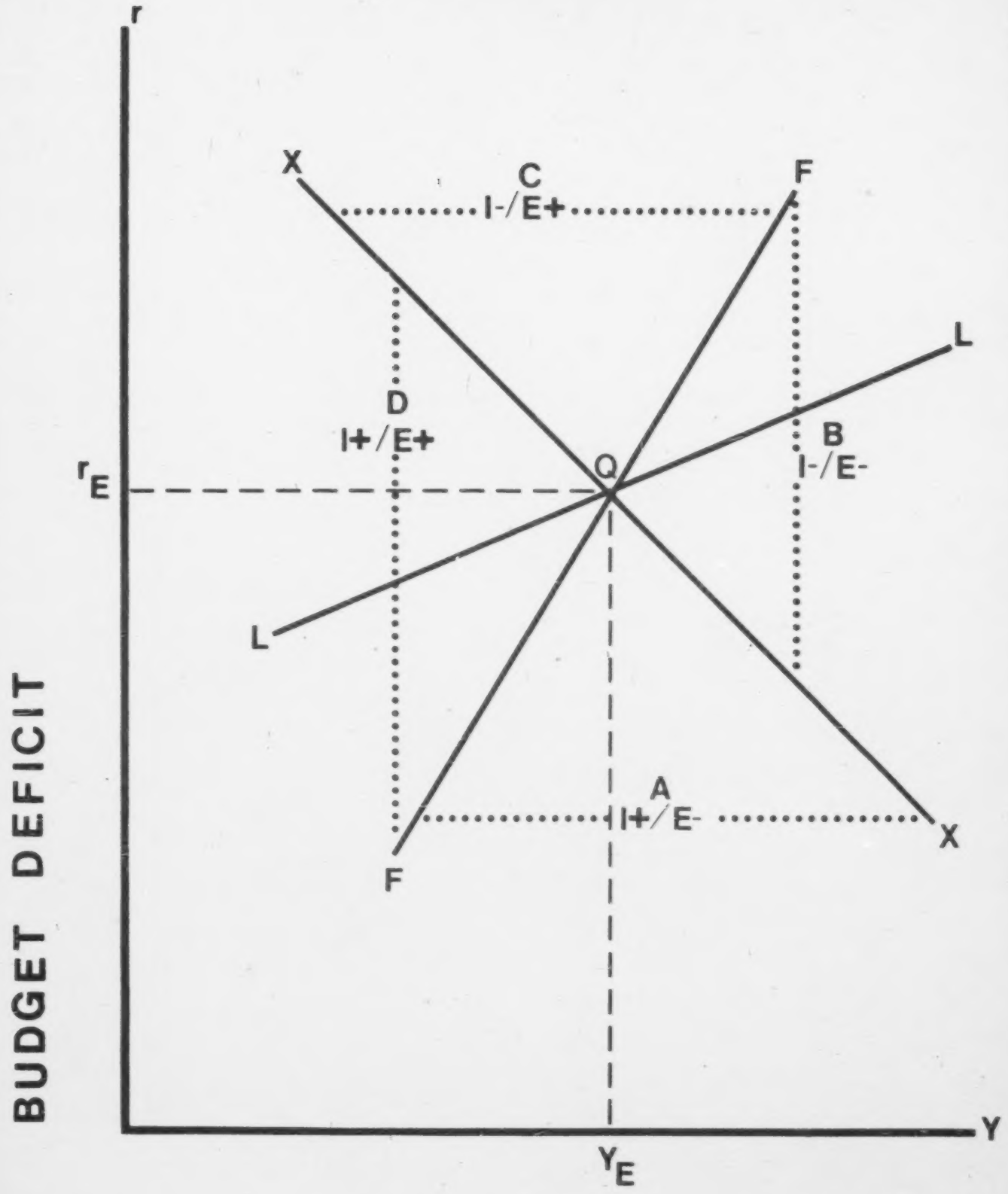
3. The balance of payments is in equilibrium.

The conditions of balance in the goods, money, and foreign exchange markets depend on the level of money income, the rate of interest, and the quantity of money. It is assumed that a change in the money supply affects the goods and foreign exchange sectors only through its effect on the interest rate.

The system is illustrated in Figure III-0. The XX curve represents the levels of interest rates (r) and money income (Y) where there is equilibrium in the goods market. It is negatively sloped because lower rates of interest are generally associated with economic growth and higher levels of income. The FF curve represents equilibrium in the balance of payments and is positively sloped because an increase in the interest rate improves the balance of payments by attracting capital while an offsetting increase in income worsens the balance of payments by attracting imports. The elasticity of this curve depends largely upon the relationship of domestic interest rates and income levels to those among major trading partners. The LL curve represents equilibrium in the money market for any given quantity of money. If the quantity of money increases, the LL curve shifts downward and to the right. If the quantity of money decreases, the LL curve shifts in the opposite direction.

The point where the three curves intersect (Q) represents general equilibrium in an open economy. Any economic disturbance, foreign or domestic, that shifts one of the three curves out of its original position will be followed by an automatic adjustment process, which will establish a new equilibrium level, possibly at a lower level of income. However, as stated earlier, if equilibrium means a lower income level, stabilization policies may lead to corrective steps by authorities to stimulate the domestic economy via fiscal and monetary instruments at the expense of the balance of payments. These corrective steps prevent this adjustment process from working. For this reason, many countries, including the United States, remain in disequilibrium for long periods of time and take no steps to correct the situation.

FIGURE III-0



Referring once again to Figure III-0, there are four types of disequilibrium associated with the four quadrants produced by the intersection of the XX and FF curves. Any point lying in Quadrant A (coded I+/E- for internal plus and external minus) represents inflation and balance of payments deficit disequilibrium. Quadrant B (coded I-/E-) includes recession and balance of payments deficit disequilibrium. Quadrant C (I-/E+) represents a recession and a balance of payments surplus. Quadrant D (I+/E+) represents inflation and a balance of payments surplus. Quadrant B is the location in which the United States now finds itself with a huge balance of payments deficit, historically high unemployment, and sluggish economic growth.

Mundell states that a combination of policies (monetary, fiscal, balance of trade) is usually the most effective way of restoring the original or alternative equilibrium levels. The use of monetary policy alone is effective only if the disequilibrium point lies on a straight line directly above (I-/E+) or below (I+/E-) the original equilibrium point.

Policy options which affect the FF schedule include an increase or reduction in private capital exports through use of government subsidies, or the use of tariffs, quotas, export subsidies, and devaluation. Policy options that affect the XX schedule include the fiscal instruments of raising or lowering taxes and increasing or reducing budget deficits.

III. Conclusions

An analysis of economic policy in the 1980-85 period using the Mundell disequilibrium model suggested a move away from internal inflation and toward full employment via tight money and deficit spending. High capital inflows from the resulting high interest rates and accompanying low internal GNP growth pushed the economy toward a recession/surplus position, the I-/E+ zone in Figure III-0 (see Appendix I for a basic analysis of the 1980-1985 experience). When internal growth turned up resulting from deficit spending and a switch to monetary ease, imports swelled, shifting the economy into an inflation/deficit position, I+/E- zone, Figure III-0. Use of selective tariffs, export subsidies and dollar depreciation from continued monetary ease, nudged the economy toward equilibrium. However, imports continued to cut into the trade balance effecting a stall in the move toward equilibrium.

A search, using the same analysis was made to identify the policy option most likely to foster a move by the economy toward equilibirum. Of six options, trade protection with budget cuts and moderate monetary ease (Policy F) and moderate monetary ease with modest budget cuts (Policy C) appear the best on balance. External balance is achieved in Option F at the expense of a lower national income growth rate but with the accompaniment of the much needed lower interest rate. Somewhat surprisingly, the Option F results suggest in the short run that some trade protection is helpful. The implications of monetary ease without budget cuts (Policy A' in Appendix II) were the most negative. Despite high growth (Y86a', Appendix II), the accompanying acceleration of inflation from exhaustion of excess production capacity, rising interest rates from responsive tight money, and rising imports, push the economy substantially away from equilibrium (See Appendix II, Figure III-2 for a basic analysis of positions Qa through Qf. A complete analysis will appear soon in a special VEC report).

FOOTNOTES

1. "The International Disequilibrium System," in International Economics, MacMillan, 1968. We have transformed Mundell's Budget Surplus Quadrant into its associated budget deficit (negative) quadrant and the related X, L, and F functions accordingly.

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APPENDIX I

Reagan Economic Policy and Internal/External Balance 1981-85

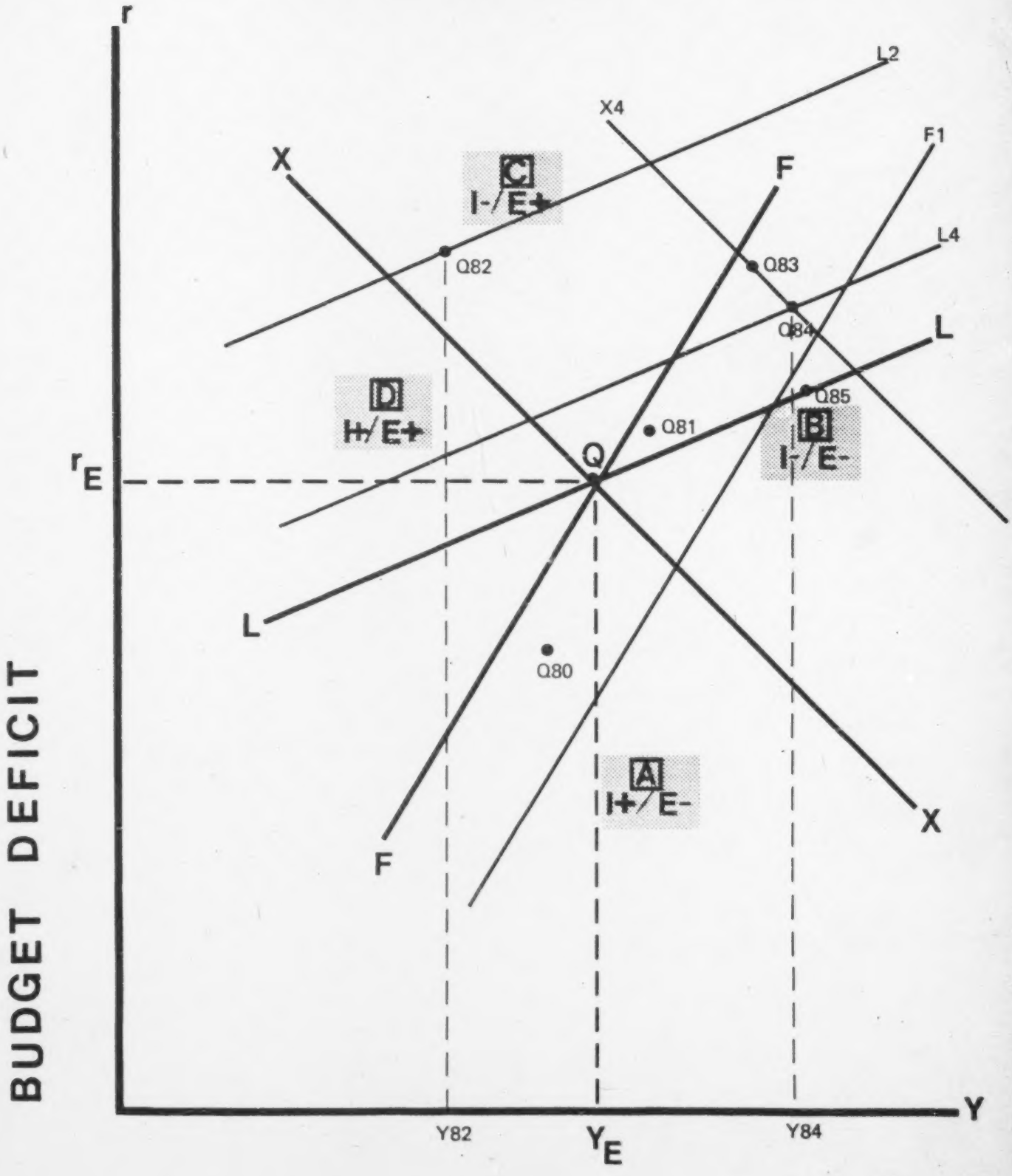
Within the bounds of the U. S. internal/external balance framework and in consideration of the backdrop of the road to current external deficit, it is possible to (1) track the moves of Reagan policy since 1980 and (2) evaluate the policy options toward dual balance in the near term.

The Carter administration ended in the internal inflation/external deficit economic condition approximated by Q80 on Figure III-1. Q80 coincides with X (internal), F (external balance), and L (monetary condition below L characterized by inflation). The Reagan administration's initial target seemed to be Q81--a move away from internal inflation and toward full employment via tight money (L4) (L function above L) and deficit spending (X4) (X function to the right of X). However, high interest rates from 1981-82 tight money bolstered the capital inflow account portion of the Balance of Payments (BOP) and shifted F to F1 leaving the economy at Q82--a depression/surplus locus on Figure III-1, northwest of Q. The higher growth of GNP had not stimulated imports sufficiently to move F southeast such as to place Q81 northwest of Q in an external surplus situation.

When imports started to swell in 1982-1983, the administration further tightened money to an L function well above L (to L2) in an effort to further squeeze inflation and stimulate capital inflows (CI) to offset import growth. This policy targeted Q82 on Figure III-1 at a declining level of national income, Y82. However, as shown in Figure III-1, the administration was unable to hold the target range. In 1983, the spending multiplier from deficit spending, which later stimulated a rapid rise in imports aided by further deficits in 1984, both effects moving X to an X function above X (to X4), swamped the increases in CI as reflected in the shift from F1 to F. F combined with L4--switch to monetary ease--generated higher growth in 1983 and 1984, positions even more in external deficit.

In 1985, as shown in Figure III-1, there was concern for growing imports and massive merchandise trade deficits ($150 billion). Debt reduction (X4 moving back toward X), introduction of selective tariffs, export subsidies, and dollar depreciation resulting from continued monetary ease (back to L) caused a shift to F1 from F to a Q85 position closer to target equilibrium Q. However, a slowing growth rate resulted as imports continued to cut into the trade balance.

FIGURE III-I


r
L2
X4
F1
X
C
I-/E+
F
L4
Q82
Q83
Q84
L
D
H/E+
Q85
B
I-/E-
Q81
Q
r_E
L
Q80
A
I+/E-
X
F
BUDGET DEFICIT
Y
Y82
Y_E
Y84

APPENDIX II

Analysis of Six Economic Policy Options

Of the six options cited in Section I (Introduction), F and C appear best and A' worst for the following reasons:

A. Monetary ease (L5 on Figure III-2) must be joined by deep budget cuts (i.e. X) to move the system toward Q. Such cuts are not politically feasible in the short run and would slow growth below 1985's low level as well as require excessive monetary ease. However, the system would move closer to Q.

In Option A', without budget cuts (X4), higher growth (Y86a') would result temporarily. However, the ensuing inflation would require a return to tighter money (L) and the higher interest rates than 1985 compared with the lower rates under deep budget cuts. The system would temporarily move away from Q to Q86a' then back toward Q85. Since monetary ease has to be rescinded, Option A' represents no progress over 1985.

With the deep cuts in Option A, however, the lower interest rates would retard capital inflows moving F left and moving the system slightly further away from Q.

B. Tight money (L6 on Figure III-2) without budget cuts would raise interest rates and substantially damp economic growth to near zero (Y86b). It would, of course, generate an external surplus at Q86b, and be further enforced because the F function would shift right, driven by high interest rates, accelerating capital inflows and by low income growth, slowing imports. Q86b would be a move away from equilibrium and toward more unemployment internally, into a deficit/surplus zone.

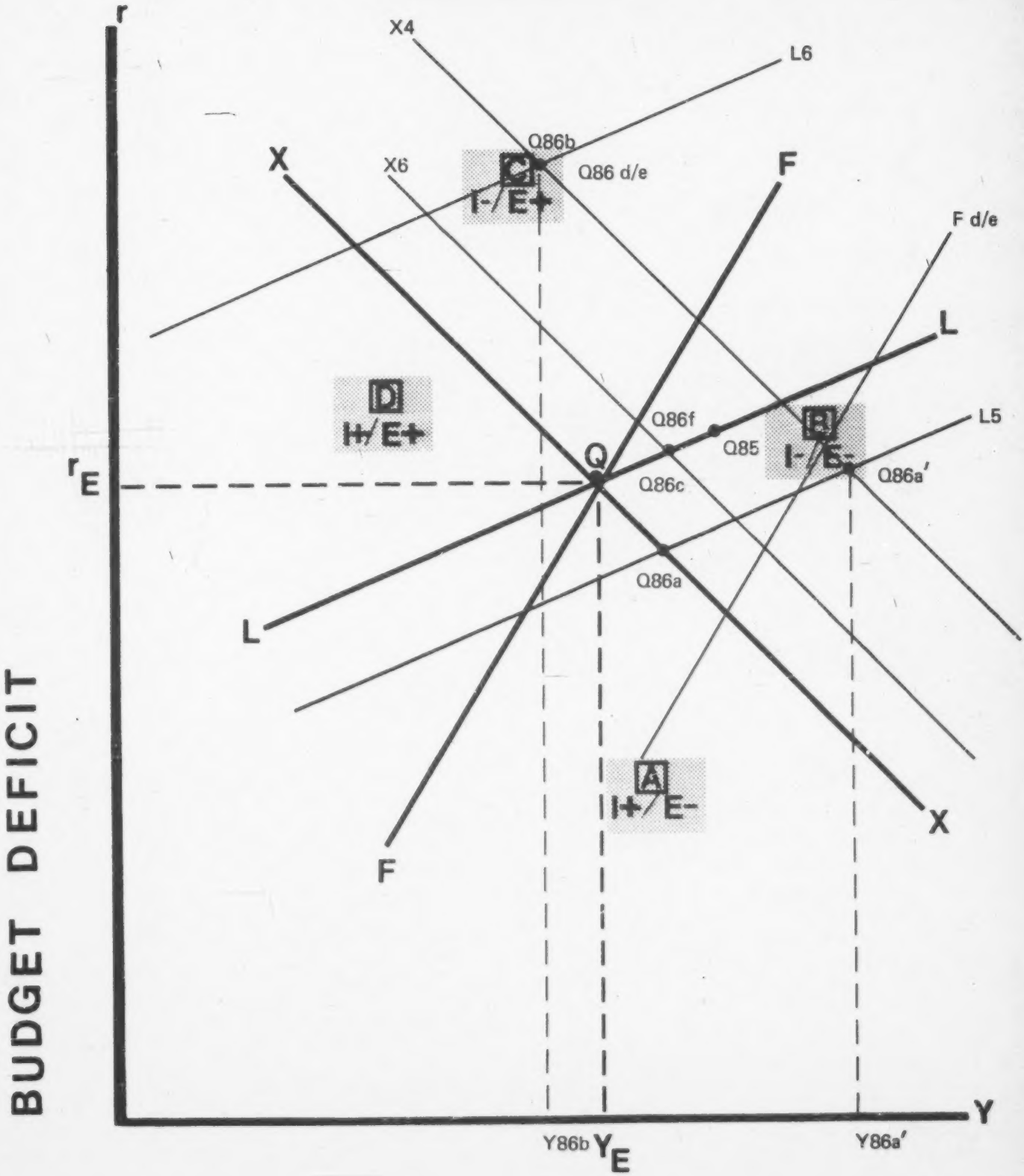
C. Monetary ease (L) and modest budget cuts (X6) result in about the same modest growth rate as in 1985. This approach permits monetary ease to produce more growth than Option A at interest rates lower than 1985. At Q86c, Policy C is stable in that interest rates are lowered enough compared to 1985 to reduce capital inflows while the modest growth slows the increase in imports leaving F unchanged. The system, however, is only slightly closer to Q than under Q85 situation of 1985 and no closer to Q than in Option A, although at a higher level of growth.

D. Trade protection would shift F right to Fd/e on Figure III-2 and put the system into the external surplus zone. However, the resulting inflation from import substitution by domestic goods would require tight money (L6). The resulting higher than 1985 interest rates would still be about as high as Policy B, and growth would be just between Option B and C. The system would move from Q to Q86d/e, further into the internal deficit zone.

E. Dollar depreciation would generate the same scenario as D. The F function would shift right to Fd/e with tight money (L6) resulting also in the same level of national income as Option D.

F. Trade protection with budget cuts and moderate monetary ease (L) in Figure III-2 shows the same Fd/e generated by rising exports and falling imports in Policies D and E. At Fd/e, the system moves into internal balance at the same growth rate as Policy C. The need to cut the budget deficit (X6) results in the same interest rate as Option C. This re-accelerates capital inflows but is offset by imports falling faster than exports so Fd/e does not change. The system moves closer to internal and external balance but at a slightly slower growth than in 1985. Unless falling interest rates are contained with monetary tightness, falling rates will devalue the dollar and improve the trade balance. The accelerating capital outflow account will outrun the rising trade balance before it turns around and shift Fd/e to F. This would result in a move back into external deficit as exports rise and the fall in imports (rekindled by the falling dollar value) cannot overtake the drop in the capital account.

FIGURE III-2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X4
L6
Q86b
X
X6
C
I-/E+
Q86 d/e
F
F d/e
L
D
I+/E+
Q86f
Q85
B
I-/E-
L5
Q
Q86a'
r_E
Q86c
Q86a
L
A
I+/E-
X
F
BUDGET DEFICIT
Y
Y86b
Y_E
Y86a'

HISTORICAL SUMMARY

Performance of Indicators Over the Business Cycle

GENERAL INFORMATION

For those interested in studying the business cycle in Virginia, this publication includes several of the economic time series for which data is readily available on a monthly basis. From time to time, new series will be added and, if necessary, others presently included will be discontinued.

BUSINESS CYCLE TURNING POINTS

The shaded spaces on the charts represent the 1973-75, 1980, and 1981-82 recessions as designated by the National Bureau of Economic Research (NBER). The beginning of a recession is defined as the month when aggregate economic activity in the U. S. reaches a cyclical high, from which it begins to turn down, and the end as the month when it reaches a cyclical low, from which it begins to turn up. According to NBER, the 1973-75 recession began in November 1973 and ended in March 1975, the 1980 recession began in January 1980 and ended in July 1980, and the 1981-82 recession began in July 1981 and ended in November 1982.

SEASONAL ADJUSTMENT

To correlate changes in a time series and changes in the business cycle it is desirable

SEASONAL ADJUSTMENT (continued)

to eliminate, insofar as possible, the effect of irrelevant factors from the data comprising the series. All series currently published in Indicators have been adjusted to minimize regular seasonal fluctuations in the data in order to show only activity related to the business cycle.

MONTHS FOR CYCLICAL DOMINANCE (MCD)

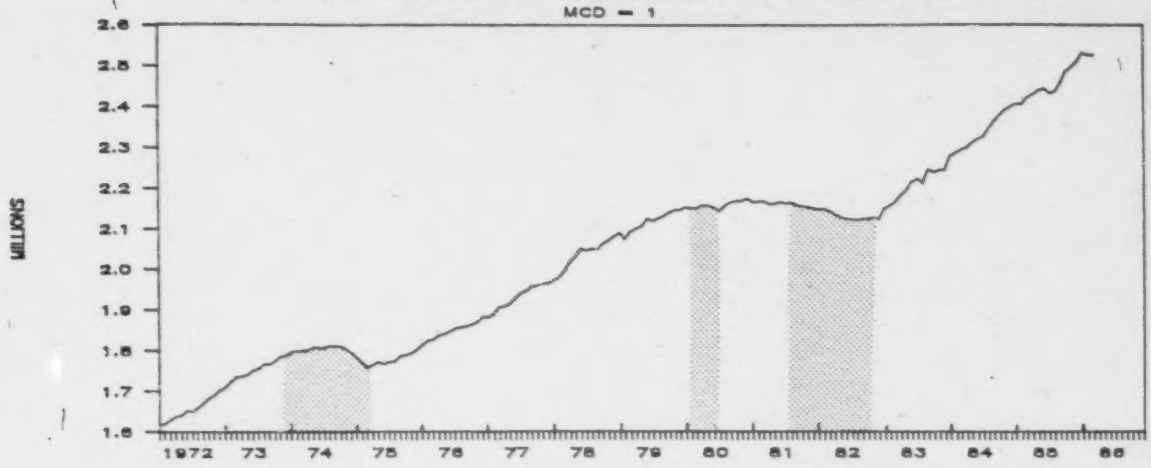
After seasonal adjustment there often remains a significant degree of purely random change, the effect of which can be minimized with a moving average equal in length to the MCD of the series. The MCD is an estimate of the length of the moving average which will reveal the cyclical pattern among the welter of random fluctuations in the data--the greater the MCD the more random and less cyclically significant are monthly changes in the series. Where noted, charts of historical data in this publication represent seasonally adjusted figures which have been averaged according to the MCD of each series.

DATA SOURCES

Nonagricultural Wage and Salary Employment	Virginia Employment Commission (VEC)
Manufacturing Employment	VEC
Total Unemployment Rate	VEC
Average Weekly initial Claims	VEC
Insured Unemployment Rate	VEC
Unemployment Insurance Final Payments	VEC
Average Manhours	VEC
Average Hourly Earnings	VEC
Average Weekly Earnings	VEC
Average Workweek	VEC
New Business Incorporations	Virginia State Corporation Commission
Valuation of Building Permits - 18 Cities	Local Building Inspectors
New Vehicle Registrations	Virginia State Division of Motor Vehicles
Electrical Power Sales	VEPCO, Appalachian Power Co., Delmarva Electric Co., Tennessee Power Company
Taxable Retail Sales	Virginia State Department of Taxation
Taxable Retail Sales/CPI	Virginia State Department of Taxation

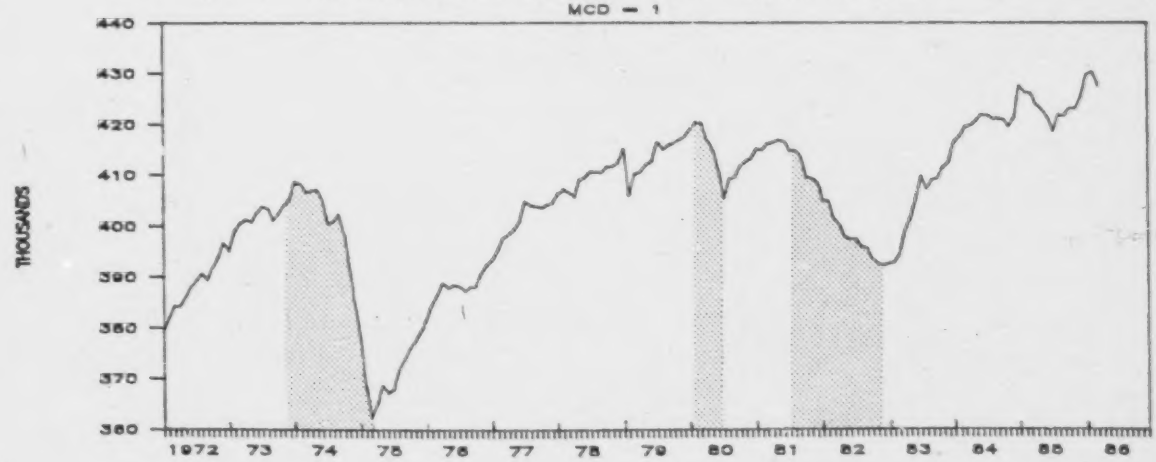
NONAG WAGE & SALARY EMPLOYMENT

MCD — 1



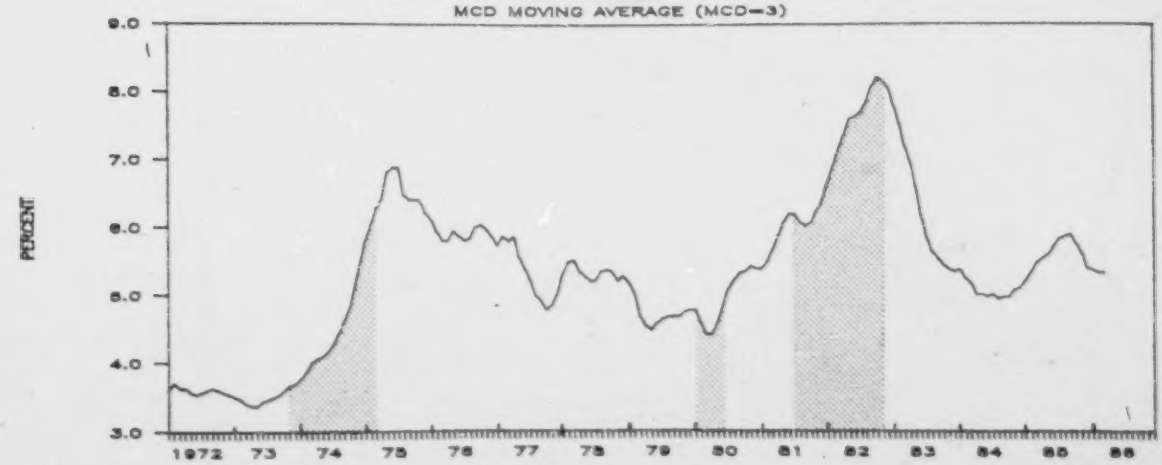
MANUFACTURING EMPLOYMENT

MCD — 1



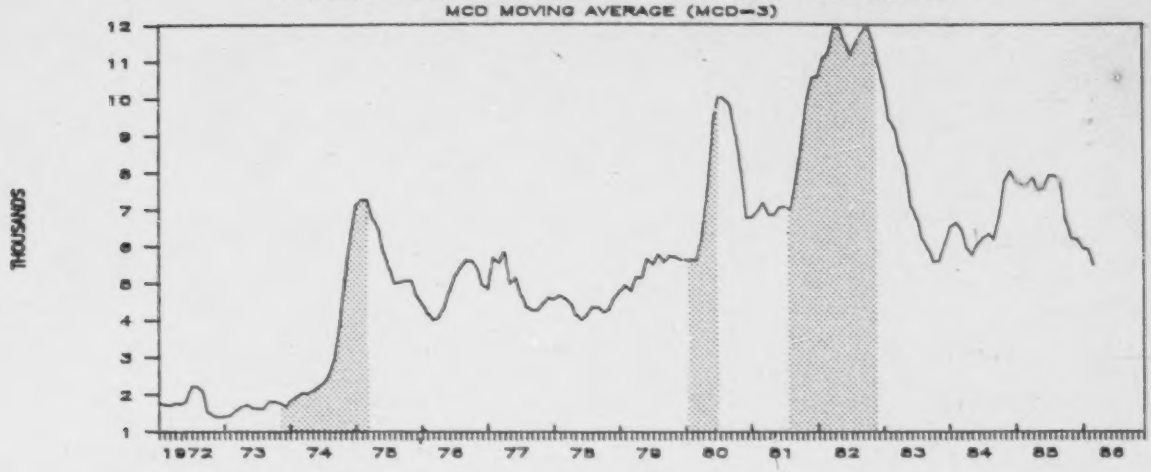
TOTAL UNEMPLOYMENT RATE

MCD MOVING AVERAGE (MCD=3)



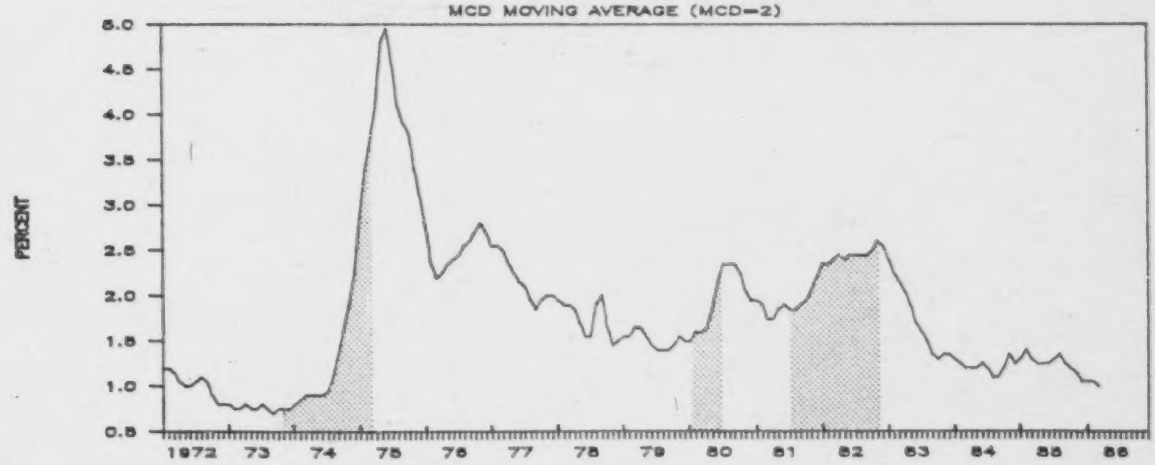
AVERAGE WEEKLY INITIAL CLAIMS

MCD MOVING AVERAGE (MCD=3)



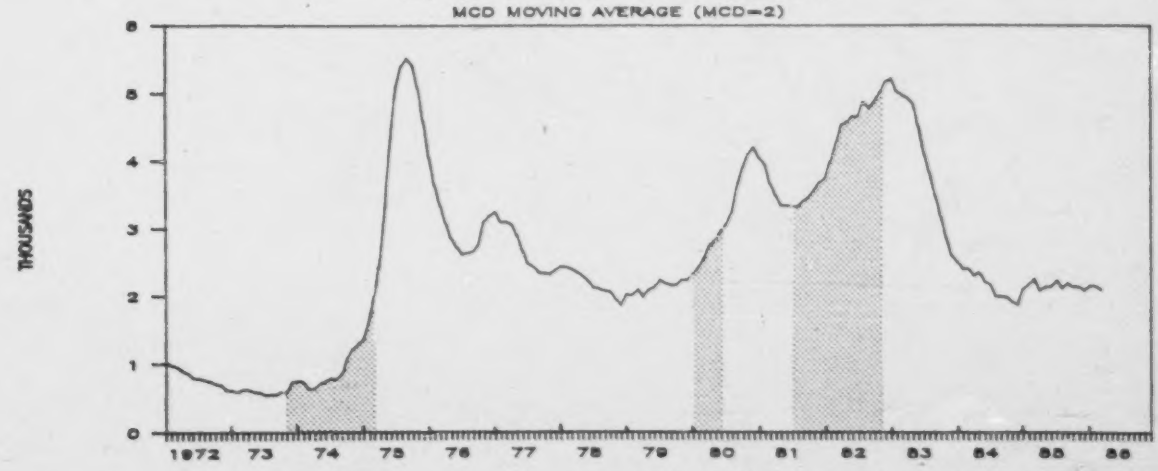
INSURED UNEMPLOYMENT RATE

MCD MOVING AVERAGE (MCD=2)



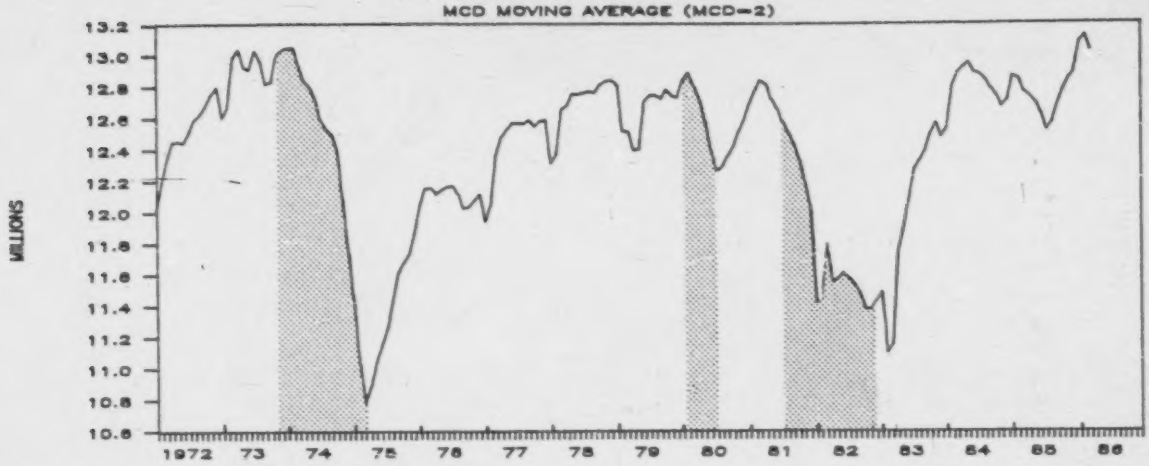
U. I. FINAL PAYMENTS

MCD MOVING AVERAGE (MCD=2)



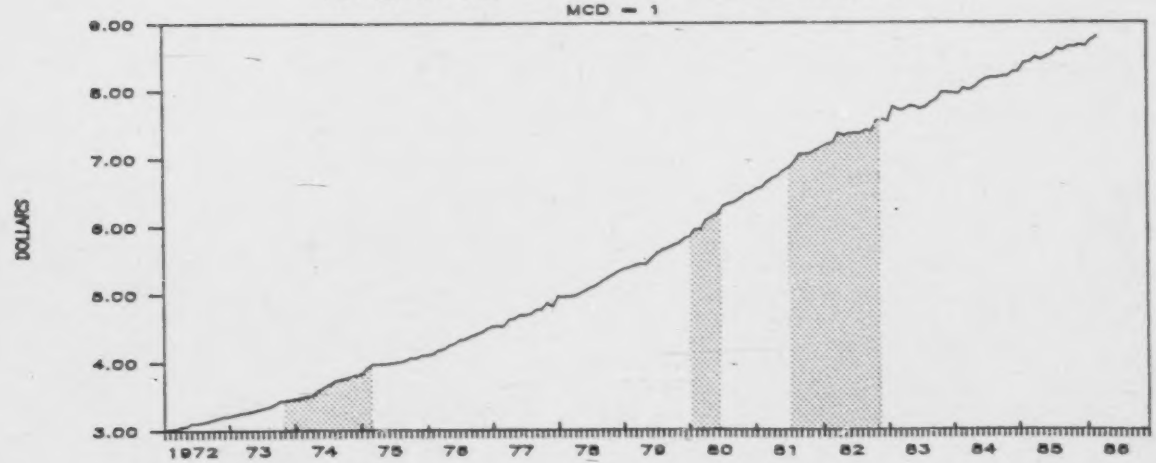
AVERAGE MANHOURS

MCD MOVING AVERAGE (MCD=2)



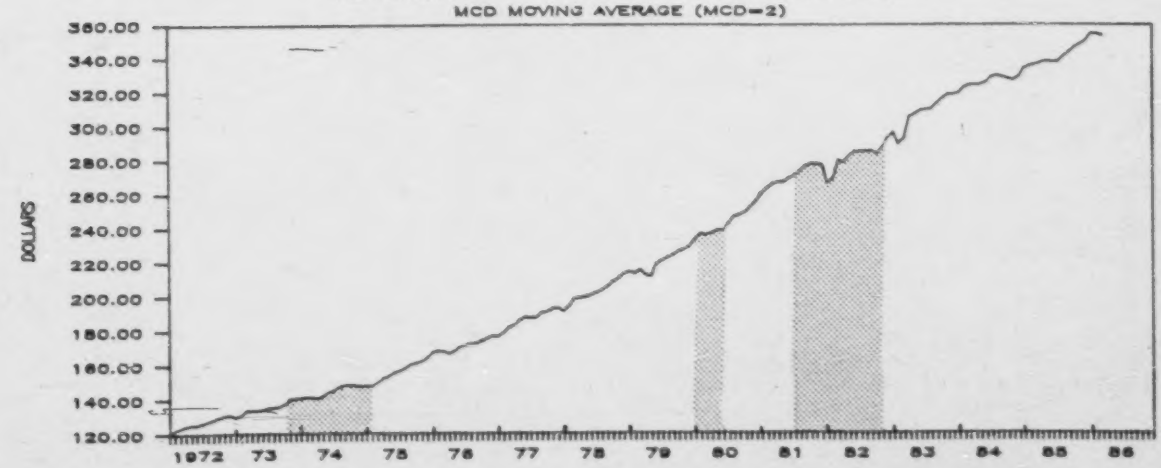
AVERAGE HOURLY EARNINGS

MCD = 1



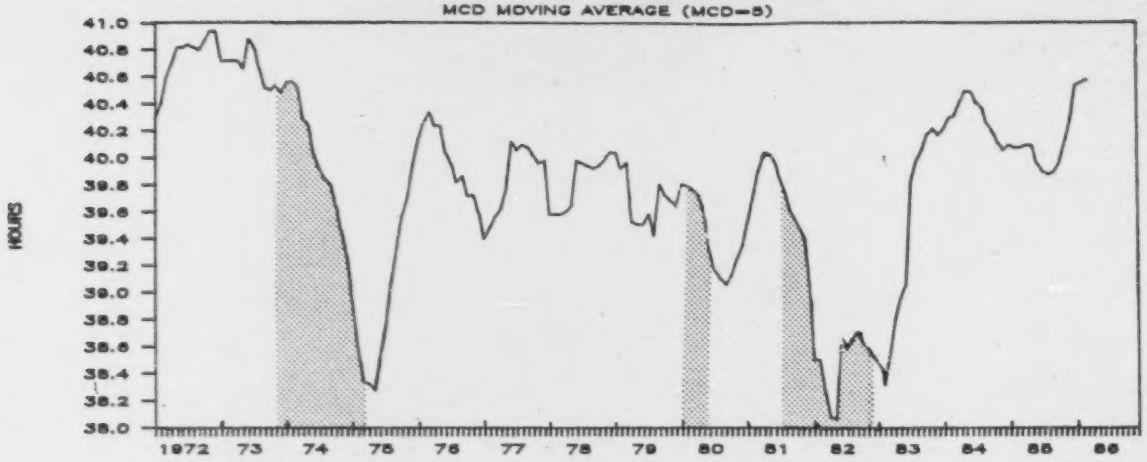
AVERAGE WEEKLY EARNINGS

MCD MOVING AVERAGE (MCD=2)



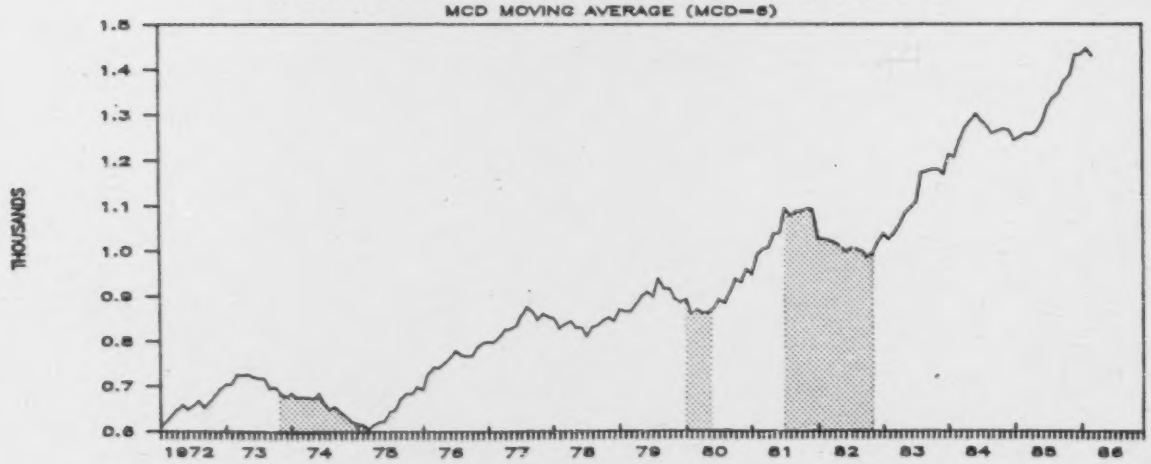
AVERAGE WORKWEEK

MCD MOVING AVERAGE (MCD=6)



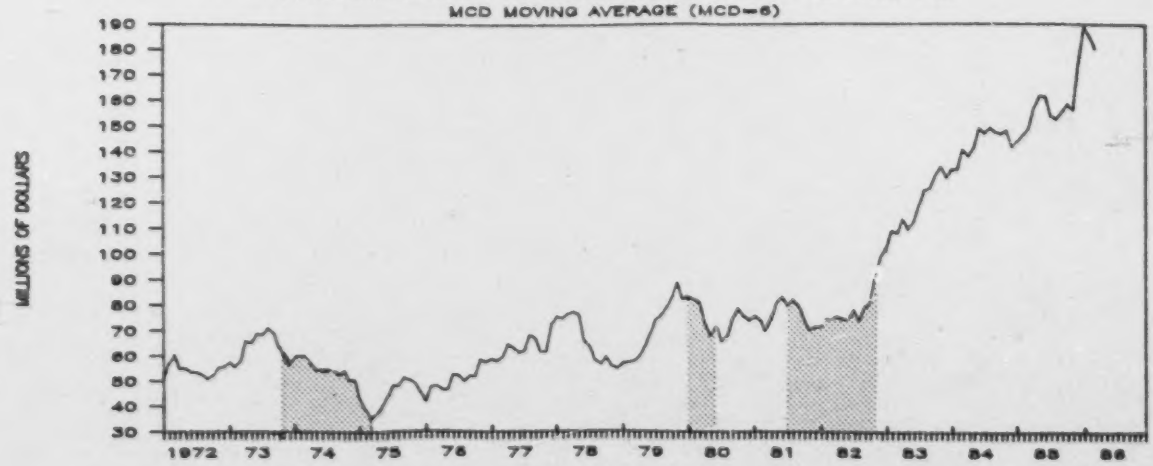
NEW BUSINESS INCORPORATIONS

MCD MOVING AVERAGE (MCD=6)



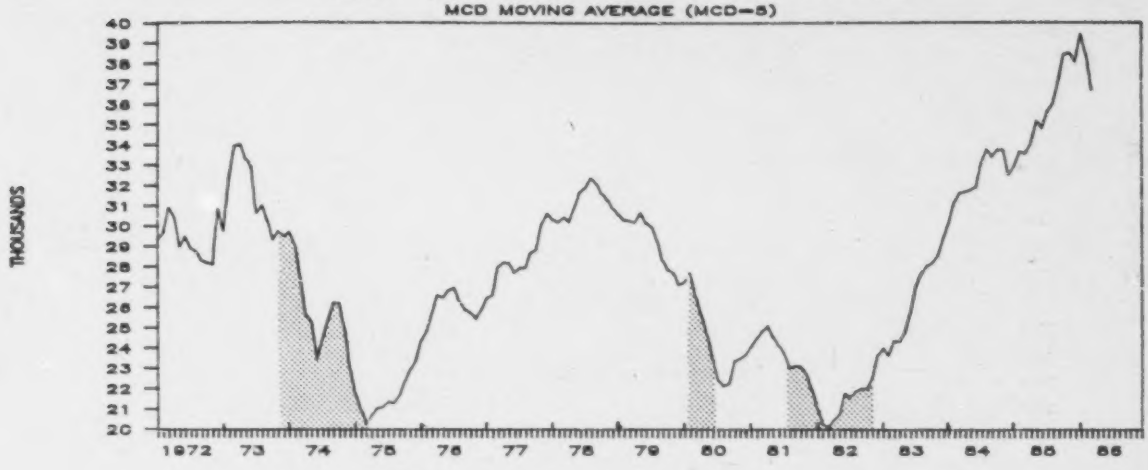
VALUATION OF BUILDING PERMITS

MCD MOVING AVERAGE (MCD=6)



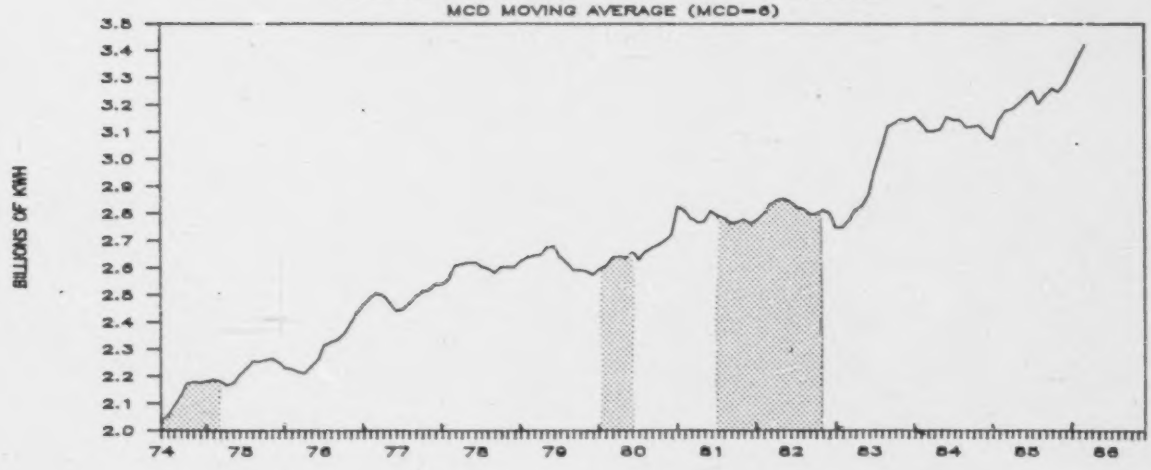
NEW VEHICLE REGISTRATIONS

MCD MOVING AVERAGE (MCD=8)



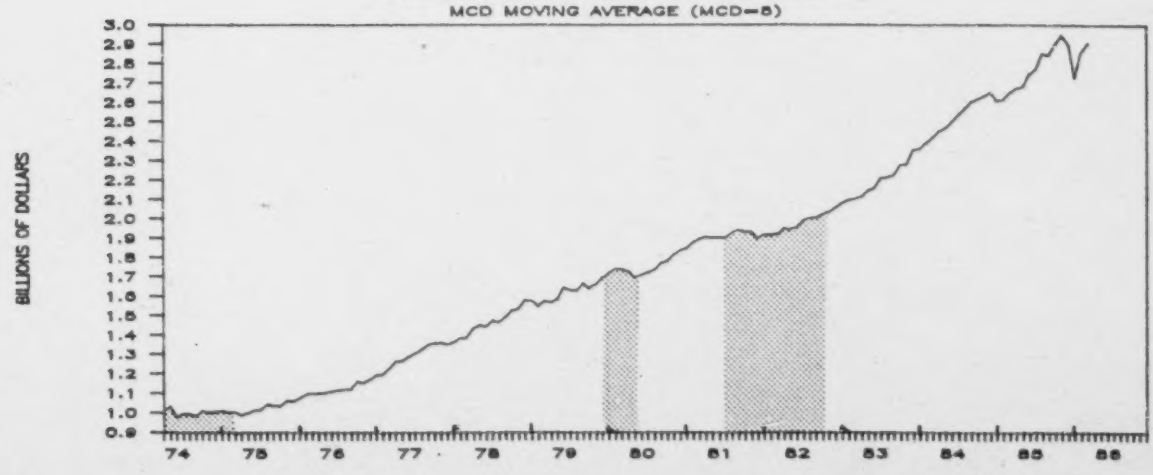
ELECTRICAL POWER SALES

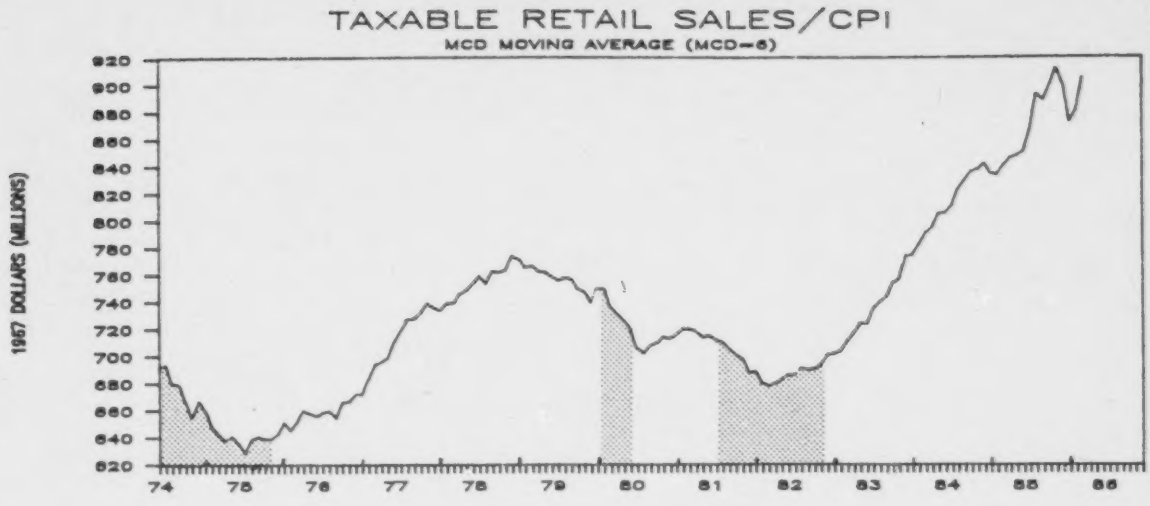
MCD MOVING AVERAGE (MCD=8)



TAXABLE RETAIL SALES

MCD MOVING AVERAGE (MCD=8)




TAXABLE RETAIL SALES/CPI
MCD MOVING AVERAGE (MCD-6)
1967 DOLLARS (MILLIONS)
920
900
880
860
840
820
800
780
760
740
720
700
680
660
640
620
74
75
76
77
78
79
80
81
82
83
84
85
86

Virginia Employment Commission
Economic Information Services Division
Post Office Box 1358
Richmond, Virginia 23211

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Virginia Employment Commission

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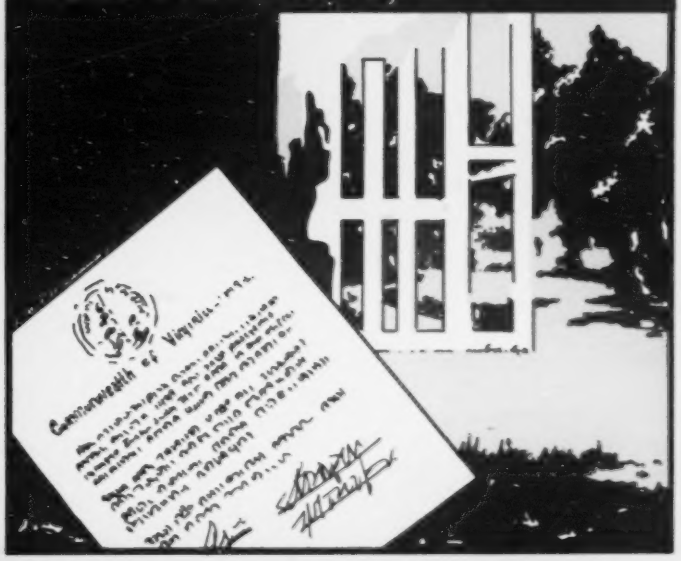
VIRGINIA ECONOMIC INDICATORS

VOL XVIII NO.2

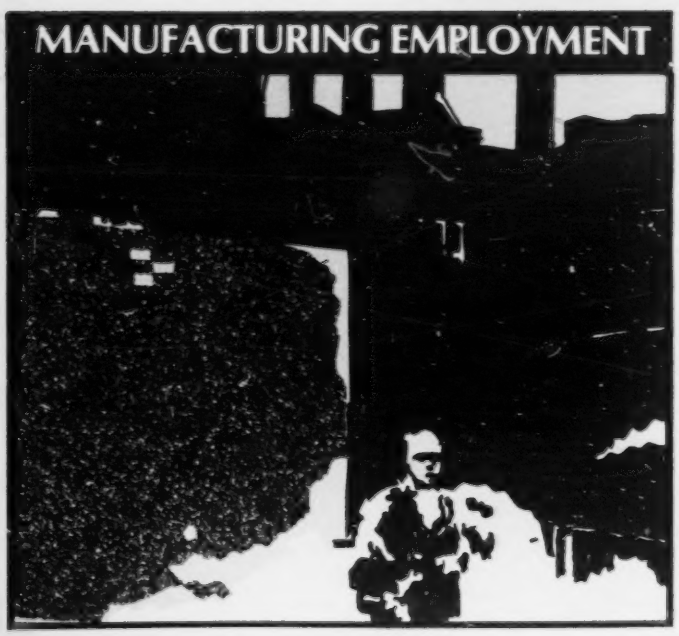
2nd QUARTER 1986 DATA

BUILDING PERMITS

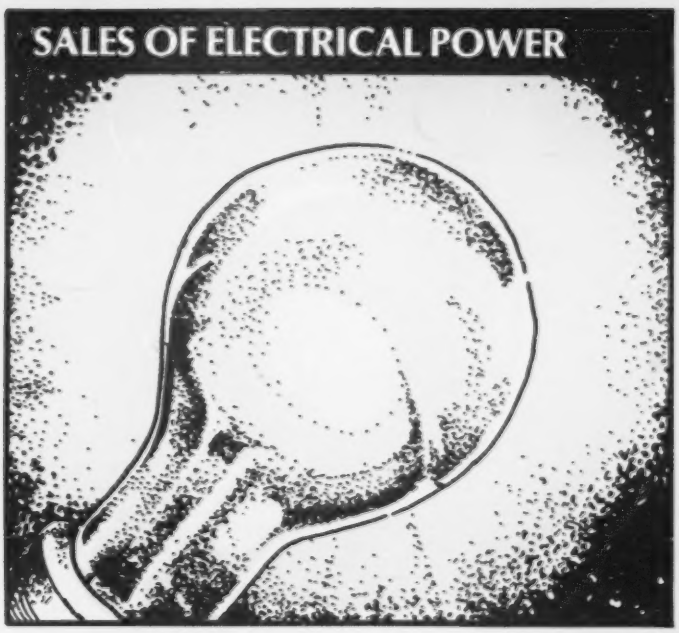


NEW VEHICLE REGISTRATION

MANUFACTURING EMPLOYMENT



SALES OF ELECTRICAL POWER



Virginia Employment Commission

FOREWORD

This publication is designed to depict the movement of Virginia's key economic indicators in graphic and tabular form with accompanying narrative analysis.

We welcome any comments, suggestions, or questions concerning Virginia Economic Indicators. Please contact Jeffrey A. Windom, Director, Economic Information Services Division, P. O. Box 1358, Richmond, Virginia 23211, telephone (804) 786-7496, for additional information or explanation of the contents of this document.

Note to Virginia Economic Indicators Readers:

In our Fourth Quarter 1985 issue in the "Dollar Depreciation and Employment in Virginia" article by Conway Lackman, Ph.D., we predicted that dollar depreciation would raise Virginia nonfarm employment to 2,485,660 by Third Quarter 1986 and to 2,548,450 by Fourth Quarter 1987 and manufacturing employment to 420,223 and 428,435, respectively, for those periods. July 1986 bore out our forecast as nonfarm employment reached 2,534,900, just 1.9 percent off the mark, while manufacturing ran ahead of us somewhat in July, reaching 428,000--a level not expected until September 1987--but only 1.8 percent off the mark. It is unusual to achieve 2 percent accuracy on a 6-month statewide employment forecast, especially during a period of major international currency realignment where imports loom as a factor in our forecast, and we hope to maintain this new level of credibility with our readers.

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Second Quarter Economy Stumbles on Weak Sales and Income - The tiny 0.6 percent second quarter real GNP growth (1982 dollars) reflected the 2.7 percent decline in industrial production and virtually flat personal income and retail sales. Factors suggesting little chance of a pickup much above 2.5 percent for the rest of 1986 are:

- The 6.5 percent increase in real spending (with low savings) suggests that consumption has finished its response to lower energy and food prices.
- Lackluster wage increases and moderating consumer debt means household spending will taper off.
- As expected, single family housing sales are tapering off in the absence of further significant declines in mortgage rates.
- Lower interest rates, a strong stock market, and need to improve productivity are not enough to overcome massive excess plant capacity and overbuilt commercial construction that will continue to retard business investment. And, business unwillingness to add to debt and to inventories due to slowing sales and profits is not a plus.
- Despite an unresolved federal budget, government expenditures will still moderate, taking a little more steam out of total demand.
- The strong exports to Latin America and OPEC nations no longer mask the deficit problem. Rising import competition spreading even to the agricultural sector where the U. S. was once king and willingness of importers to eat margins before raising prices has kept the declining dollar from correcting the trade deficit.

Third Quarter Economy to Resume Moderate Growth - Despite some underlying weaknesses, a 2.5 percent third quarter real GNP growth is expected from:

- A drop in the savings rate of 0.4 percent to offset slowing income.
- A 9 percent rise in state and local government expenditures to offset a 5 percent drop at the federal level.
- A moderate improvement in the trade deficit ($13 billion on an annualized basis).

Nonetheless, several factors suggest that economic policy will only prevent a further slowdown rather than generate faster growth.

- Expansion of money by the federal government looks increasingly like "pushing on a string." High debt burden, excess capacity, and slowing income growth have reduced the impact of interest rate declines on GNP growth. However, monetary expansion will boost inflation by 1987.
- Real interest rates are still far above the level where capital spending and inventory decisions will be stimulated.
- Fiscal policy is unlikely to contribute to growth as expenditures are slowed to meet deficit reduction targets

Long-term Outlook Still Clouded - Real GNP is expected to continue a leisurely climb of 2.6 - 2.7 percent for both 1987 and 1988, but risks in key areas still cloud the picture:

- The Consumer - confidence is still high, wealth is rising, and discretionary spending power is up with declining mortgage payments; but real incomes are growing slower, the debt burden is high, and oil savings have already been spent.
- The Trade Deficit - improvement contingent upon:
  - continued decline in prices of U. S. goods relative to foreign goods
  - higher growth rates in export markets relative to growth in the U. S.
  - reduction of the federal deficit and less upward pressure on interest rates
- Tax Reform - a downside risk
  - less incentive to finance with debt
  - negative impacts on investment and productivity
- The Federal Deficit - hard to determine
  - slow growth could reduce revenues
  - supplemental appropriations could swell expenditures
  - a tax increase is a distinct possibility for FY 1988
- Inflation - currently understated because of cheap oil
  - oil prices will stabilize and increase a little
  - foreign goods will cost more
  - easier money will increase demand
  - weak investment could lower productivity

HIGHLIGHTS
VIRGINIA ECONOMIC INDICATORS
Second Quarter 1986

- In the Second Quarter 1986, three series reached all-time highs on a seasonally adjusted basis. One record was set in May and two in June.
  - Average weekly earnings posted a new high of $358.26 in May, a gain of $19.37 over the year earlier period.
  - Average hourly earnings broke new ground each month of the quarter and finished the period at a record of $8.89 an hour in June, up $.40 an hour over a year ago.
  - The lowest interest rates in almost a decade caused the valuation of building permits issued to skyrocket from $147.2 million in March to the never before attained level of $309.0 million in June.
- Seasonally adjusted nonagricultural employment in May at 2,531,300 was just 800 shy of the all-time record set back in January. Nonfarm employment was down temporarily to 2,521,500 in June as the result of summer vacation plant closings which fell mostly in June this year rather than in the more usual July. Actually, total summer plant closings were lighter this year than they have been in years, reflecting the current strong state of the Virginia economy.
- Virginia's total unemployment rate fell to 5.1 percent in both May and June on the seasonally adjusted basis. This is the lowest level for joblessness in the State since the November - December period of 1984. The decline in the value of the U. S. dollar has helped Virginia manufacturers be more competitive with imports and has mostly eliminated the temporary off-week type layoffs prevalent throughout 1985.
- The seasonally adjusted jobless rate averaged 5.2 percent in Second Quarter 1986, below both the 5.4 percent average of the First Quarter and the 5.7 percent average of Second Quarter 1985.
- The insured unemployment rate (the ratio of claimants to covered employment) held steady in the second quarter at a low 1.1 percent.
- Unemployment Insurance final payments increased in April and June from March's 15-month low of 1,840 because of the exhaustion of benefits of tobacco workers laid off six months earlier in the Petersburg area.
- New vehicle registrations reached a strong 39,175 for June, but this was still below October 1985's record of 44,066 when extensive buyer incentive programs were in place.
- Electric power sales at 3,654.2 million kilowatt hours in June were second only to the record 3,665.2 million kilowatt hours of March 1986. An early hot spell kept air conditioners humming.
- According to the U. S. Department of Commerce, Virginia with a 2.5 percent increase in personal income in the First Quarter of 1986 scored the second largest percentage increase among the 50 states.
- According to the U. S. Bureau of Labor Statistics, productivity in the business sector nationally declined at a 0.3 percent annual rate during the Second Quarter of 1986, as output fell 0.4 percent and hours of all persons engaged in the sector decreased 0.1 percent (seasonally adjusted annual rates). The declines in output and hours during the Second Quarter of 1986 were the first since the Fourth Quarter of 1982. Compared with the Second Quarter of 1985, productivity increased 0.8 percent as output rose 2.3 percent and hours of all persons increased 1.6 percent.
- Declining energy prices caused a drop in the CPI from First to Second Quarter. The CPI for All Urban Consumers averaged 326.5 (1967 = 100) for the Second Quarter 1986, down 0.2 percent from 1986's First Quarter. This compared to a 1.2 percent increase from First to Second Quarter 1985. Over the year, prices in Second Quarter 1986 averaged 1.7 percent higher than in Second Quarter 1985.
- Virginia's coal production at 25,617,000 short tons for the first six months of 1986 was 1.8 percent above coal production during the first six months of 1985. While coal production continued to increase, mine employment in the first half of 1986 was down 1.7 percent from the first half of 1985.

VIRGINIA ECONOMIC INDICATORS

VOL. XVIII, NO. 2 SECOND QUARTER DATA

Some Weaknesses Noted by June, Still Three Series Set New Highs in Second Quarter

Like the national economy, the Virginia economy seemed to lose some steam in the second quarter. Most Virginia series have performed so well recently that they now seem to have increasing difficulty bettering the previous month's performance. Three series, however, still managed to set all-time records in the second quarter--average hourly earnings at $8.89 in June; average weekly earnings at $358.26 in May; and building permits issued at a remarkable $309.0 million in June. Also, the total unemployment rate at 5.1 percent in both May and June was at the lowest level in 18 months. Three series: average hourly earnings, building permits, and new vehicle registrations were consistently positive each month of the quarter.

April saw eight series up and seven down. May was the second quarter's best month with eleven series positive, one unchanged, and only three down. Deterioration set in by June with eight series negative, two unchanged, and only five positive. Of the series that were down in June, most were just barely negative, and some of this decline was probably the result of oversensitivity in the seasonal adjustment factors. Raw data for July would indicate a very strong month.

The six-month moving average of the number of rising indicators (page 8) serves to illustrate the second quarter's erratic performance. The moving average enhances analysis because it smooths out much of the irregularity present in many of the individual series.

Overall Erratic Movement Noted with So-So April, Strong May, and Weak June

Nonagricultural employment statewide showed improvement in both April and May with May being just shy of January's seasonally adjusted all-time record level. Nonfarm employment was then off by 0.4 percent in June. Most of this decline could be traced to the fact that more of this year's traditional plant furloughs around the July Fourth holiday fell in June rather than July. Factory employment was off slightly in April, up in May, and down in June. Factory performance in June also reflected the timing of summer plant closings and, in fact, was largely responsible for the nonfarm decline. Both employment series were positive before seasonal adjustment and appear to have been victims of over-compensation by the seasonal adjustment factors. Preliminary data indicates a strong comeback for both series in July.

The four indicators that measure the impact of unemployment on the Virginia economy were erratic in the second quarter, being all negative in April, mostly positive in May, and then half were negative in June. Both April (Easter) and June (July Fourth) seem to have been overly influenced by the timing of holiday furloughs this year. The total unemployment rate on a seasonally adjusted basis rose 0.1 percent in April, fell 0.3 percent in May to 5.1 percent, the lowest level since December 1984, then held steady in June. New claims as the result of holiday furlough scheduling were up in April, down in May, and then up again in June. The insured jobless rate increased 0.1 percent in April, then held steady for the remainder of the quarter at a still low 1.1 percent. Unemployment insurance final benefit payments were up in April, down in May, and up again in June. The final payment increases in April and June were to some extent reflecting the timing of mass plant closings six months earlier in tobacco as these workers drew their 26 weeks and passed out of the Unemployment Insurance system.

The four production worker series performed best in April, with all series positive, then slid downhill after that. The length of the production workweek, seasonally adjusted, was up in April, then trailed off in both May and June. The average number of manhours worked followed a similar pattern as the summer vacation period approached. Average hourly wages for production workers increased throughout the period, reaching an all-time high of $8.89 per hour in June. Average weekly wages increased in April, established a new high of $358.26 in May, then slid off to $355.10 in June.

The five business-related indicators were generally the strongest performers in the second quarter. The number of new business incorporations increased in April, dipped in May, and recovered part of the lost ground in June. Because of the lowest interest rates since the mid-1970s, building permits moved up in April, set a new record of $244.1 million in May, then really soared 26.6 percent to the astounding level of $309.0 million in June. Also buoyed by attractive financing rates, new vehicle registrations climbed consistently higher throughout the period, but June's 39,175 new car sales were short of the all-time record of October 1985's 44,066 sales. The major car makers had offered strong incentive packages in the fall of 1985 to clear up leftover models. Electric power sales were below March's record of 3,665.2 million kilowatt hours in April, then recovered much of the lost ground to finish the quarter at 3,654.2 million kilowatt hours in June. Hot dry weather and the earlier than usual usage of air conditioning pushed up power output toward the end of the quarter. Retail sales slid in April after an early Easter, regained some strength in May, and were slightly off in June, possibly because of hot temperatures keeping shoppers at home.

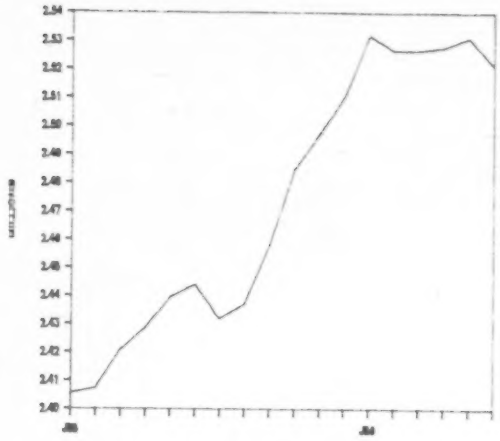
EMPLOYMENT AND UNEMPLOYMENT INDICATORS
January 1985 to June 1986

	Nonagricultural Wage & Salary Emp.* (Thousands)		Manufacturing Employment* (Thousands)		Total Unemployment Rate* (Percent)	
1985	Unadj.	Adj.	Unadj.	Adj.	Unadj.	Adj.
January	2,362.8	2,405.7	422.6	427.4	6.1	5.4
February	2,361.8	2,407.4	422.3	426.2	6.2	5.5
March	2,392.6	2,420.9	422.9	426.1	5.9	5.5
April	2,418.2	2,428.7	421.9	423.8	5.5	5.6
May	2,449.7	2,439.6	421.1	422.7	5.5	5.7
June	2,481.2	2,444.1	423.1	421.3	5.7	5.8
July	2,443.1	2,432.0	417.9	418.7	6.0	6.0
August	2,446.9	2,437.0	423.6	421.8	5.4	5.8
September	2,479.3	2,458.0	426.3	421.6	5.2	5.9
October	2,498.7	2,485.1	426.8	423.1	5.2	5.6
November	2,507.3	2,497.6	425.6	423.1	5.3	5.4
December	2,522.9	2,510.4	425.9	425.1	5.3	5.2
1986						
January	2,486.5	2,532.1	425.0	429.7	6.2	5.5
February	2,478.8	2,526.8	426.4	430.3	6.0	5.3
March	2,496.4	2,526.7	425.1	428.1	5.6	5.3
April	2,517.8	2,527.9	425.1	426.8	5.3	5.4
May	2,541.4	2,531.3	425.8	427.5	4.9	5.1
June	2,559.3	2,521.5	427.5	425.4	5.0	5.1

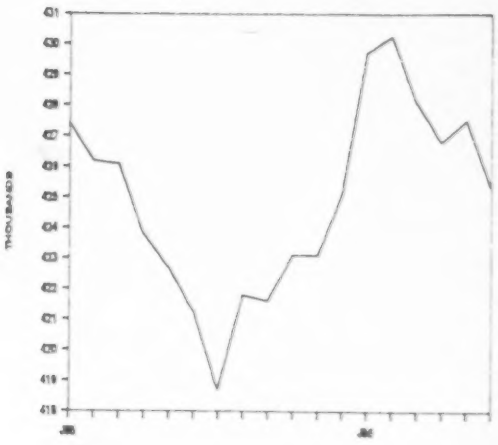
	Average Weekly Initial Claims (Number)		Avg. Wkly. Insured Unemployment Rate (Percent)		U. I. Final Payments (Number)	
1985	Unadj.	Adj.	Unadj.	Adj.	Unadj.	Adj.
January	12,108	7,281	2.2	1.5	2,613	2,751
February	8,996	8,523	1.8	1.3	2,052	2,137
March	6,752	7,203	1.7	1.3	2,374	1,921
April	6,767	7,845	1.2	1.2	3,117	2,244
May	5,475	7,555	1.1	1.3	2,680	2,289
June	5,869	7,322	1.0	1.2	2,019	1,947
July	8,538	8,875	1.2	1.4	2,571	2,492
August	5,249	7,526	1.0	1.3	1,845	1,963
September	4,344	6,777	0.9	1.2	1,630	2,142
October	5,002	5,828	0.9	1.2	1,862	2,364
November	6,100	6,087	1.0	1.1	1,557	1,944
December	11,965	6,644	1.1	1.0	1,836	2,004
1986						
January	8,597	5,179	1.6	1.1	2,439	2,549
February	6,258	5,926	1.4	1.0	1,888	1,961
March	5,133	5,466	1.3	1.0	2,276	1,840
April	6,049	7,034	1.1	1.1	3,089	2,211
May	4,273	5,943	0.9	1.1	2,292	1,947
June	5,266	6,616	0.9	1.1	2,186	2,122

*These series have been adjusted to First Quarter 1985 benchmarks.

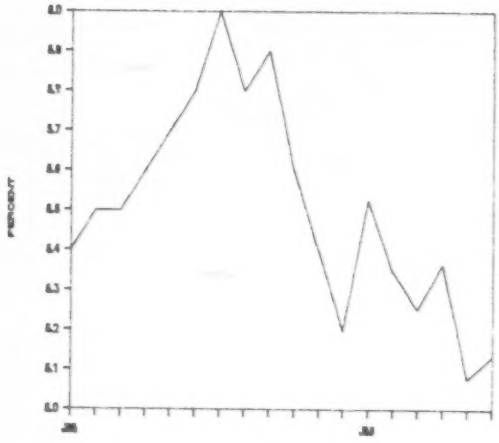
NONAG W & S EMPLOYMENT



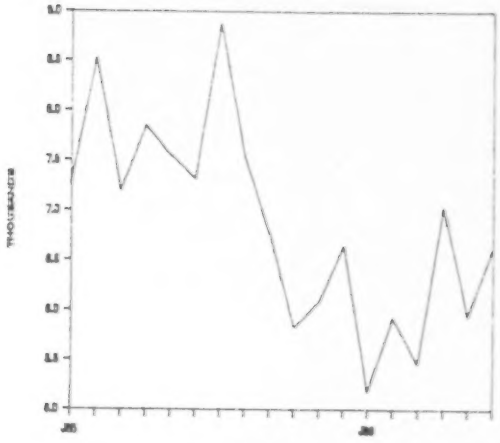
MANUFACTURING EMPLOYMENT



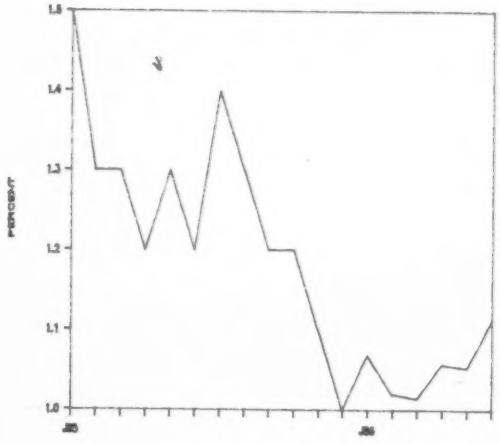
TOTAL UNEMPLOYMENT RATE



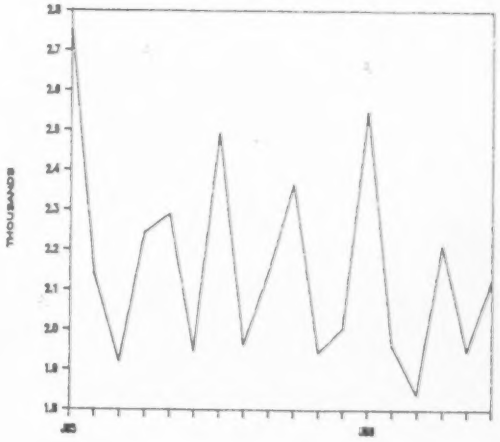
AVG. WEEKLY INIT. CLAIMS



INSURED UNEMPLOYMENT RATE



U. I. FINAL PAYMENTS



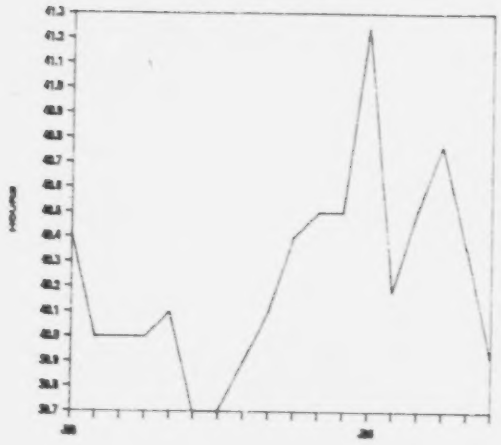
MANUFACTURING PRODUCTION WORKER INDICATORS
January 1985 to June 1986

	Average Weekly Hours* (Hours)		Average Manhours* (Thousands)	
1985	Unadj.	Adj.	Unadj.	Adj.
January	39.7	40.4	12,613.4	12,939.7
February	39.3	40.0	12,432.1	12,757.6
March	39.6	40.0	12,551.1	12,774.8
April	39.6	40.0	12,508.8	12,697.9
May	40.1	40.1	12,635.0	12,693.0
June	40.2	39.7	12,763.6	12,566.0
July	39.6	39.7	12,408.0	12,480.6
August	40.0	39.9	12,718.8	12,650.7
September	40.4	40.1	12,969.5	12,716.1
October	40.5	40.4	12,994.1	12,836.0
November	41.0	40.5	13,112.2	12,858.5
December	41.2	40.5	13,152.4	12,917.0
1986				
January	40.5	41.2	12,903.9	13,248.4
February	39.5	40.2	12,658.7	12,996.6
March	40.1	40.5	12,830.7	13,065.9
April	40.4	40.8	12,932.0	13,115.6
May	40.4	40.4	12,948.2	13,000.2
June	40.4	39.9	12,992.6	12,788.0

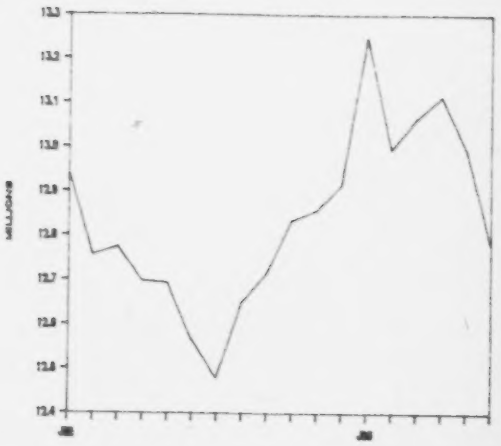
	Average Hourly Earnings* (Dollars)		Average Weekly Earnings* (Dollars)	
1985	Unadj.	Adj.	Unadj.	Adj.
January	8.36	8.28	331.89	335.44
February	8.42	8.40	330.91	335.81
March	8.42	8.42	333.43	337.08
April	8.49	8.48	336.20	337.83
May	8.43	8.45	338.04	338.89
June	8.46	8.49	340.09	337.38
July	8.50	8.53	336.60	338.82
August	8.57	8.61	342.80	343.18
September	8.56	8.59	345.82	344.29
October	8.59	8.64	347.90	348.57
November	8.66	8.64	355.06	348.72
December	8.71	8.67	358.85	351.74
1986				
January	8.73	8.65	353.57	357.50
February	8.76	8.73	346.02	351.29
March	8.78	8.78	352.08	356.00
April	8.81	8.79	355.92	357.35
May	8.85	8.87	357.54	358.26
June	8.86	8.89	357.94	355.10

*These series have been adjusted to First Quarter 1985 benchmarks.

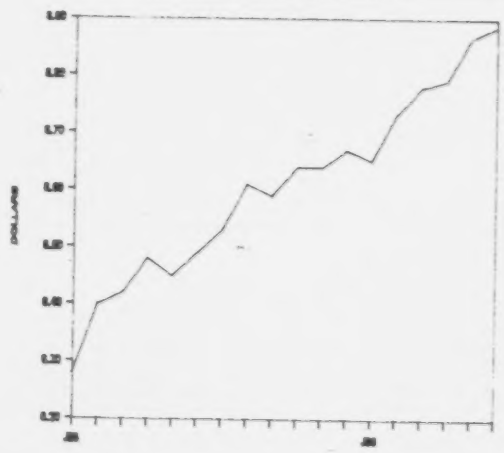
AVERAGE WEEKLY HOURS



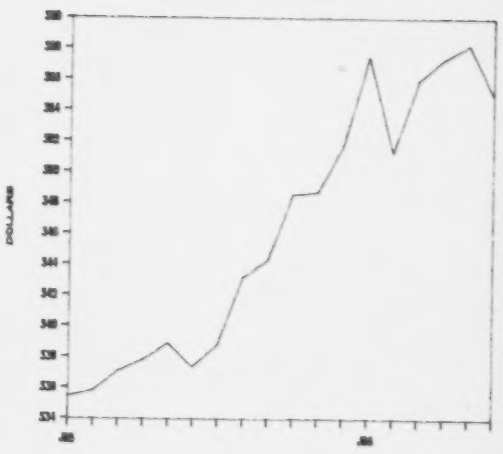
AVERAGE MANHOURS



AVERAGE HOURLY EARNINGS



AVERAGE WEEKLY EARNINGS

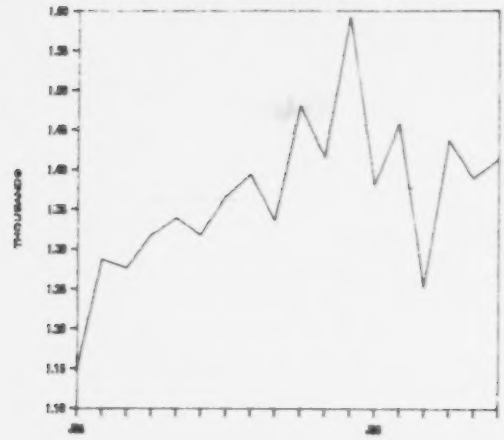


BUSINESS INDICATORS
January 1985 to June 1986

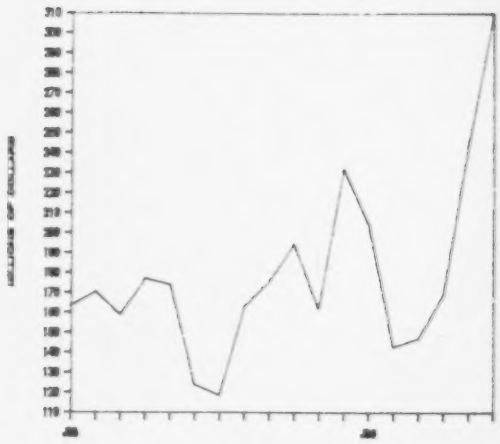
	New Business Incorporations (Number)		Valuation of Bldg. Permits ($ Millions)		New Vehicle Registrations (Number)	
1985	Unadj.	Adj.	Unadj.	Adj.	Unadj.	Adj.
January	1,154	1,148	139.1	163.7	33,530	35,998
February	1,294	1,288	139.8	170.6	29,072	33,279
March	1,424	1,277	195.6	159.0	38,164	33,795
April	1,447	1,319	204.4	177.2	39,165	35,073
May	1,380	1,340	166.0	174.0	42,505	37,754
June	1,348	1,319	149.5	124.1	40,170	34,296
July	1,315	1,367	133.7	118.7	41,215	37,447
August	1,445	1,395	165.0	163.1	37,532	35,570
September	1,212	1,338	166.0	175.8	41,423	40,942
October	1,455	1,481	198.5	194.5	40,354	44,066
November	1,254	1,417	154.4	162.4	29,286	34,655
December	1,508	1,593	167.1	232.3	25,460	35,299
1986						
January	1,391	1,383	175.3	205.3	39,473	42,262
February	1,469	1,459	117.8	143.0	31,677	36,327
March	1,401	1,254	180.3	147.2	38,739	34,496
April	1,579	1,438	194.3	169.0	41,469	37,192
May	1,438	1,391	230.2	244.1	42,820	37,860
June	1,445	1,414	374.5	309.0	45,992	39,175

	Electrical Power Sales (Mil. of KHW)		Taxable Retail Sales ($ Millions)	
1985	Unadj.	Adj.	Uadj.	Adj.
January	3,594.5	3,040.7	2,247.3	2,445.9
February	3,835.0	3,472.8	2,311.6	2,661.8
March	3,186.8	3,193.3	2,599.4	2,817.3
April	2,959.2	3,188.4	2,720.0	2,765.7
May	2,753.3	3,264.7	2,894.6	2,718.2
June	3,059.5	3,232.8	2,739.5	2,764.0
July	3,400.3	3,166.2	2,797.3	2,794.0
August	3,563.5	3,199.0	3,133.0	3,205.5
September	3,626.9	3,378.7	2,750.8	2,741.2
October	2,892.8	3,328.9	3,027.4	2,991.4
November	2,769.9	3,203.3	3,031.9	2,999.2
December	3,403.8	3,408.3	3,214.4	2,579.3
1986				
January	4,062.3	3,439.7	2,144.1	2,333.1
February	3,851.7	3,492.0	2,942.0	3,397.2
March	3,654.2	3,665.2	2,958.5	3,208.8
April	3,083.0	3,315.1	2,826.4	2,872.4
May	2,918.1	3,453.4	3,482.3	3,263.6
June	3,460.5	3,654.2	3,161.5	3,193.4

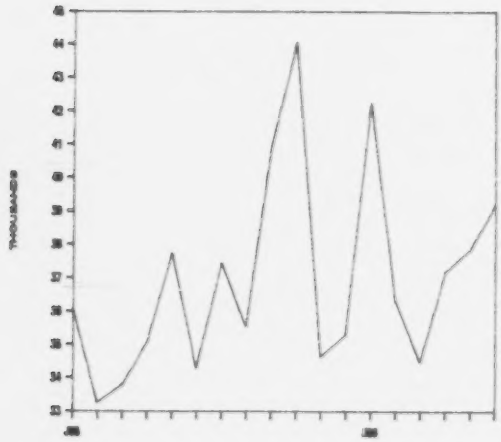
NEW BUSINESS INCORPORATIONS



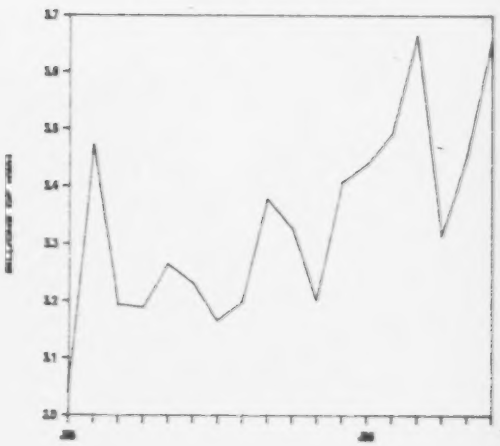
VALUATION OF BUILDING PERMITS



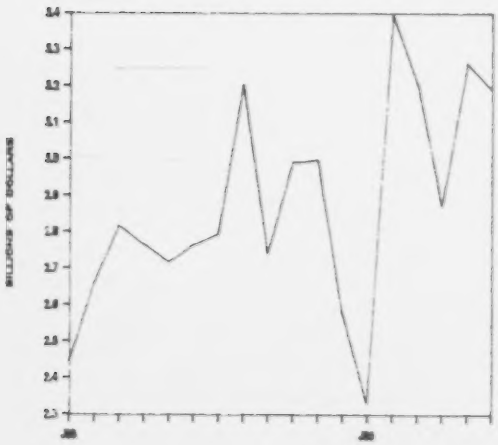
NEW VEHICLE REGISTRATIONS



ELECTRICAL POWER SALES



TAXABLE RETAIL SALES

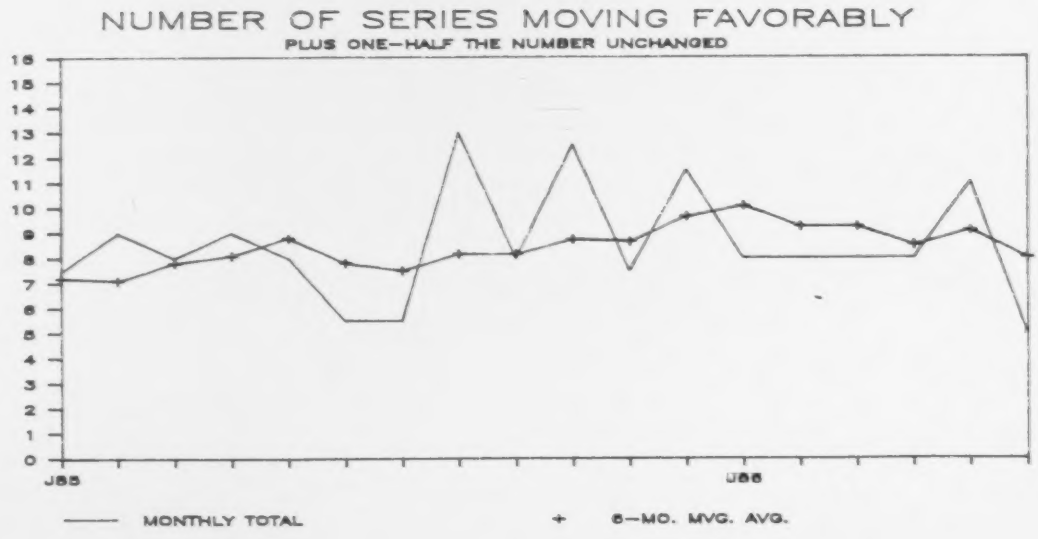


DATA SUMMARY JUNE 1986 (SEASONALLY ADJUSTED DATA)	June 1986	May 1986	June 1985	Percent & (Direction) of Change 1/ May '86- June '86	 June '85- June '86
EMPLOYMENT					
*Nonagricultural Wage & Salary Employment (000)	2,521.5	2,531.3	2,444.1	- 0.4 (-)	+ 3.2 (+)
*Manufacturing Employment (000)	425.4	427.5	421.3	- 0.5 (-)	+ 1.0 (+)
UNEMPLOYMENT					
*Total Unemployment Rate (%)	5.1	5.1	5.8	xxx (0)	xxx (+)
Average Weekly Initial Claims	6,616	5,943	7,322	+11.3 (-)	- 9.6 (+)
Average Weekly Insured Unemployment Rate (%)	1.1	1.1	1.2	xxx (0)	xxx (+)
Unemployment Insurance Final Payments	2,122	1,947	1,947	+ 9.0 (-)	+ 9.0 (-)
MANUFACTURING PRODUCTION WORKERS					
*Average Weekly Hours	39.9	40.4	39.7	- 1.2 (-)	+ 0.5 (+)
*Average Manhours (000)	12,788.0	13,000.2	12,566.0	- 1.6 (-)	+ 1.8 (+)
*Average Hourly Earnings ($)	8.89	8.87	8.49	+ 0.2 (+)	+ 4.7 (+)
*Average Weekly Earnings ($)	355.10	358.26	337.38	- 0.8 (-)	+ 5.3 (+)
BUSINESS					
New Business Incorporations	1,414	1,391	1,319	+ 1.7 (+)	+ 7.2 (+)
Valuation of Building Permits - 18 Cities ($M)	309.0	244.1	124.1	+26.6 (+)	+149.0 (+)
New Vehicle Registrations	39,175	37,860	34,296	+ 3.5 (+)	+ 14.2 (+)
Electrical Power Sales (M of KWH)	3,654.2	3,453.4	3,232.8	+ 5.8 (+)	+ 13.0 (+)
Taxable Retail Sales ($M)	3,193.4	3,263.6	2,764.0	- 2.2 (-)	+ 15.5 (+)

1/ + = Favorable, - = Not Favorable, 0 = No Change (less than .05%)

* Revised to First Quarter 1985 benchmarks

SUMMARY



DATA SUMMARY MAY 1986 (SEASONALLY ADJUSTED DATA)	May 1986	Apr. 1986	May 1985	Percent & (Direction) of Change 1/ Apr. '86- May '86	 May '85- May '86
EMPLOYMENT					
*Nonagricultural Wage & Salary Employment (000)	2,531.3	2,527.9	2,439.6	+ 0.1 (+)	+ 3.8 (+)
*Manufacturing Employment (000)	427.5	426.8	422.7	+ 0.2 (+)	+ 1.1 (+)
UNEMPLOYMENT					
*Total Unemployment Rate (%)	5.1	5.4	5.7	xxx (+)	xxx (+)
Average Weekly Initial Claims	5,943	7,034	7,555	-15.5 (+)	-21.3 (+)
Average Weekly Insured Unemployment Rate (%)	1.1	1.1	1.3	xxx (0)	xxx (+)
Unemployment Insurance Final Payments	1,947	2,211	2,289	-11.9 (+)	-14.9 (+)
MANUFACTURING PRODUCTION WORKERS					
*Average Weekly Hours	40.4	40.8	40.1	- 1.0 (-)	+ 0.8 (+)
*Average Manhours (000)	13,000.2	13,115.6	12,693.0	- 0.9 (-)	+ 2.4 (+)
*Average Hourly Earnings ($)	8.87	8.79	8.45	+ 0.9 (+)	+ 5.0 (+)
*Average Weekly Earnings ($)	358.26	357.35	338.89	+ 0.3 (+)	+ 5.7 (+)
BUSINESS					
New Business Incorporations	1,391	1,438	1,340	- 3.3 (-)	+ 3.8 (+)
Valuation of Building Permits - 18 Cities ($M)	244.1	169.0	174.0	+44.4 (+)	+40.3 (+)
New Vehicle Registrations	37,860	37,192	37,754	+ 1.8 (+)	+ 0.3 (+)
Electrical Power Sales (M of KWH)	3,453.4	3,315.1	3,264.7	+ 4.2 (+)	+ 5.8 (+)
Taxable Retail Sales ($M)	3,263.6	2,872.4	2,718.2	+13.6 (+)	+20.1 (+)

DATA SUMMARY APRIL 1986 (SEASONALLY ADJUSTED DATA)	Apr. 1986	Mar. 1986	Apr. 1985	Percent & (Direction) of Change 1/ Mar. '86- Apr. '86	 Apr. '85- Apr. '86
EMPLOYMENT					
*Nonagricultural Wage & Salary Employment (000)	2,527.9	2,526.7	2,428.7	+ 0.1 (+)	+ 4.1 (+)
*Manufacturing Employment (000)	426.8	428.1	423.8	- 0.3 (-)	+ 0.7 (+)
UNEMPLOYMENT					
*Total Unemployment Rate (%)	5.4	5.3	5.6	xxx (-)	xxx (+)
Average Weekly Initial Claims	7,034	5,466	7,845	+28.7 (-)	- 3.4 (+)
Average Weekly Insured Unemployment Rate (%)	1.1	1.0	1.2	xxx (-)	xxx (+)
Unemployment Insurance Final Payments	2,211	1,840	2,244	+20.2 (-)	- 1.5 (+)
MANUFACTURING PRODUCTION WORKERS					
*Average Weekly Hours	40.8	40.5	40.0	+ 0.7 (+)	+ 2.0 (+)
*Average Manhours (000)	13,115.6	13,065.9	12,697.9	+ 0.4 (+)	+ 3.3 (+)
*Average Hourly Earnings ($)	8.79	8.78	8.48	+ 0.1 (+)	+ 3.7 (+)
*Average Weekly Earnings ($)	357.35	356.00	337.83	+ 0.4 (+)	+ 5.8 (+)
BUSINESS					
New Business Incorporations	1,438	1,254	1,319	+14.7 (+)	+ 9.0 (+)
Valuation of Building Permits - 18 Cities ($M)	169.0	147.2	177.2	+14.8 (+)	- 4.6 (-)
New Vehicle Registrations	37,192	34,496	35,073	+ 7.8 (+)	+ 6.0 (+)
Electrical Power Sales (M of KWH)	3,315.1	3,665.2	3,188.4	- 9.6 (-)	+ 4.0 (+)
Taxable Retail Sales ($M)	2,872.4	3,208.8	2,765.7	-10.5 (-)	+ 3.9 (+)

1/ + = Favorable, - = Not Favorable, 0 = No Change (less than .05%)

* Revised to First Quarter 1985 benchmarks

ANALYZING CURRENT AND PROSPECTIVE ECONOMIC CONDITIONS - THE CYCLICAL INDICATORS APPROACH

By
Alex Valz

Construction of the National Indexes

Business cycles have been defined as sequences of expansion and contraction in various economic processes that show up as major fluctuations in aggregate economic activity. Fluctuations in Gross National Product (all goods and services) in real terms (adjusted for inflation) is the most often used measure of aggregate economic activity. The composite indexes of leading, coincident, and lagging cyclical indicators compiled by the U. S. Department of Commerce are summary measures designed to signal changes in business cycles. The indexes are constructed from time series representing widely differing activities or sectors of the economy including: (1) employment and unemployment, (2) production and income, (3) consumption, trade, orders, and deliveries, (4) fixed capital investment, (5) inventories and inventory investment, (6) prices, costs, and profits, and (7) money and credit.

Although not all of the seven economic activities are represented in each of the composite indexes, all activities are included in at least one of the three indexes. The components of the indexes are selected with the help of a formal, detailed scoring system that takes into account availability, accuracy, and economic significance but places a particular emphasis on cyclical timing. Weights are assigned to each series based on the score obtained through the scoring system. The index of leading indicators includes series which historically reached their cyclical peaks and troughs earlier than the corresponding business cycle turns. The coincident indicators reached their turning points at about the same time as the general economy, while the index of lagging indicators includes series that typically reached their peaks and troughs later than the corresponding cycle turns. The components of the three indexes are shown in the table below with the number of months that each leads or lags the business cycle peaks and troughs and their weights derived through the scoring system. Minus values designate the average months before the business cycle peak or trough that a series reached its turning point. Plus signs designate a lagged nature of a series' turning point.

	Series	Timing (Median Months) Peaks	Troughs	All Turns	Weight
LEADING INDEX COMPONENTS					
1.	Average weekly hours of production or non-supervisory workers, manufacturing	-11	- 1	- 4½	1.014
5.	Average weekly initial claims for unemployment insurance, State programs	-12	0	- 5½	1.041
8.	Manufacturers' new orders in 1972 dollars, consumer goods and materials industries	-12	- 1	- 4½	.973
32.	*Vendor performance, percent of companies receiving slower deliveries	- 6	- 4	- 6	1.081
12.	Index of net business formation	-13	- 1	- 4½	.973
20.	Contracts and orders for plant and equipment in 1972 dollars	- 8	- 1	- 3½	.946
29.	Index of new private housing units authorized by local building permits	-13	- 3	- 6	1.054
36.	*Change in manufacturing and trade inventories on hand and on order in 1972 dollars, smoothed	-11	- 1	- 5½	.986
99.	*Change in sensitive materials prices, smoothed	- 9½	- 3½	- 5½	.892
19.	Index of stock prices, 500 common stocks	- 9½	- 4	- 5½	1.149
106.	Money supply M2 in 1972 dollars	-16	- 3	-10	.932
111.	*Change in business and consumer credit outstanding	-11	- 2	- 7	.959

Series	Timing (Median Months) Peaks	Troughs	All Turns	Weight
COINCIDENT INDEX COMPONENTS				
41. Employees on nonagricultural payrolls	0	0	0	1.064
51. Personal income less transfer payments in 1972 dollars	0	- ½	0	1.003
47. Index of industrial production	- 2	0	0	1.028
57. Manufacturing and trade sales in 1972 dollars	- 3	- 1	- 1½	.905
LAGGING INDEX COMPONENTS				
91. Average duration of unemployment in weeks	0	+ 8	+ 3½	1.098
77. *Ratio, manufacturing, and trade inventories to sales in 1972 dollars	+ 8	+13	+10	.894
62. *Index of labor cost per unit of output, manufacturing--actual data as a percent of trend	+ 5	+13	+10	.868
109. *Average prime rate charged by banks	+ 3½	+15	+ 5½	1.123
101. Commercial and industrial loans outstanding in 1972 dollars	+ 4	+ 6	+ 4½	1.009
95. *Ratio consumer installment credit outstanding to personal income	+ 4	+ 7	+ 6	1.009

* First differences rather than symmetrical percent change are computed for these series.

Source: Handbook of Cyclical Indicators, U. S. Department of Commerce, 1984

Each component of the indexes is subjected to statistical procedures designed to counter certain difficulties encountered in combining economic time series. These procedures make the series more consistent and comparable and help to prevent more volatile components from dominating the indexes. A brief description of the statistical procedures as outlined in the Handbook of Cyclical Indicators may be found in the Appendix.

Developing Virginia Indexes

Of particular interest to our readers is the current development of leading and coincident indexes for the State of Virginia following the procedure used by the Bureau of Economic Analysis in constructing the national indexes. The state indexes would have the advantage of isolating the timing of business cycles in Virginia and would answer the question as to whether the state leads or lags the nation at the peaks and troughs of such cycles. An additional benefit of the indexes is the incorporation of the dissimilar data series included in this publication into a meaningful measure of the state's current economic activity indexed to activity in some prior period. Additional data series may be added to make the indexes as consistent as possible with the national indexes. The main pitfall in constructing a state index is that many of the series available nationally are not available at the state level. Examples of these are the money supply (M2) and the index of stock prices in the leading indexes and a majority of the lagging index components. This is the primary reason for not attempting to construct a state lagging indicator at this time.

Presently, five series included in this publication can be incorporated into a Virginia index of leading indicators. They are: the valuation of building permits, the number of new businesses, the average weekly hours of manufacturing production workers, the average weekly initial claims for unemployment insurance, and new vehicle registrations. The final series, new vehicle registrations, is not included in the national index but generally leads the peak of the business cycle by about 5½ months and roughly coincides with the trough. As other series become available, this series may be replaced in the leading indicators.

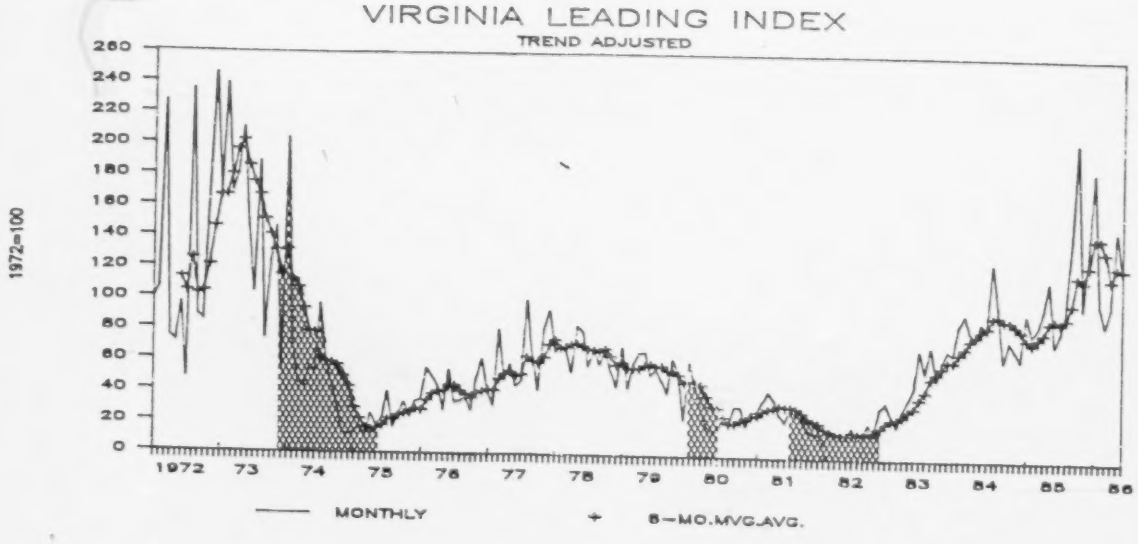
Of the four series used in the national coincident index, two--nonagricultural employment and retail sales--are now available on a statewide basis. The remaining two series--personal income less transfer payments and the index of industrial production--can be obtained from the Bureau of Economic Analysis on

a quarterly basis which would necessitate disaggregation into monthly series. Although some accuracy would be sacrificed in disaggregation, smaller weights could be assigned to these series to compensate for this error in compilation of the overall coincident index.

The chart below represents our initial attempt at constructing a leading index for the state. The plots show the monthly index and a six-month moving average of the monthly index. The moving average smooths random variations and facilitates tracking of the trend in the index.

The performance of the preliminary leading index is mixed. The index led the peaks in 1973 and 1980 and the trough in 1982. It was roughly coincidental with troughs in 1975 and 1980 and the peak in 1981. Improvement in performance of the index could be achieved through the use of moving averages in the series themselves and the addition of less volatile series. It is anticipated that these enhancements can be incorporated into the leading indicators and that an index of coincident indicators will be introduced in the next issue of Virginia Economic Indicators.

We welcome any specific comments or suggestions regarding the indexes. Please direct comments and suggestions to the Director, Economic Information Services Division (Telephone 804-786-7496).



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APPENDIX

A. Standardization and Weighting of the Components

1. Ensuring Symmetry of Monthly Changes.

Month-to-month percent changes are calculated for each component series. The percent changes are computed using the formula 200(B-A)/(B+A), where A is the value for the first month and B is the value for the second month. This procedure ensures symmetry of positive and negative changes. For example, consider a series with consecutive values of 50, 100, 50, 100, 50. The beginning and ending values of the series are the same, so there is no upward trend. However, the conventional percent change formula (100(B-A)/A) yields an average change of +25 percent since there are an equal number of 100 percent increases and 50 percent decreases. The modified formula yields an average change of zero from an equal number of increases and decreases of 67 percent and thus captures the true trend of the data series.

2. Eliminating Volatility of Series.

Monthly changes, as computed in the previous step, are divided by their long run average, without regard to sign. The average of these "standardized" changes is equal to one, thus preventing volatile component series from dominating the index.

3. Weighting Series.

The weights shown in Table 1 are applied to the standardized changes for each series and a weighted average change of each index is computed.

B. Standardization and Cumulation of the Index.

1. Standardizing the Leading and Lagging Indexes.

Weighted average changes of the leading and lagging indicators are standardized by dividing them by the ratio of their long-run average to the corresponding average for the coincident index. This makes the long-run averages for the three series equal and facilitates their use as a consistent system.

2. Cumulation of the Raw Indexes.

A value of 100 is assigned to the index for the initial month and values for subsequent months are computed by application of conventional percent changes. To accomplish this, symmetrical percent changes discussed in step A-1 are converted to conventional percent changes through use of a formula.

C. Adjustment of the Trend.

1. Establishing the Target Trend.

The percent change from the initial cycle average to the terminal cycle average is converted to a monthly rate by the compound interest formula for each component of the coincident index. The trends of the individual components are averaged to obtain the target trend.

2. Trend Adjusting the Composite Indexes.

Trends for the raw indexes are computed using the procedure described above. The differences between the target trend and the raw indexes, called trend adjustment factors, are added to the standardized average changes obtained in step A-3.

3. Cumulation of the Final Index.

The trend-adjusted changes are cumulated using the procedure in B-2 to produce the leading, coincident, and lagging composite indexes.

HISTORICAL SUMMARY

Performance of Indicators Over the Business Cycle

GENERAL INFORMATION

For those interested in studying the business cycle in Virginia, this publication includes several of the economic time series for which data is readily available on a monthly basis. From time to time, new series will be added and, if necessary, others presently included will be discontinued.

BUSINESS CYCLE TURNING POINTS

The shaded spaces on the charts represent the 1973-75, 1980, and 1981-82 recessions as designated by the National Bureau of Economic Research (NBER). The beginning of a recession is defined as the month when aggregate economic activity in the U. S. reaches a cyclical high, from which it begins to turn down, and the end as the month when it reaches a cyclical low, from which it begins to turn up. According to NBER, the 1973-75 recession began in November 1973 and ended in March 1975, the 1980 recession began in January 1980 and ended in July 1980, and the 1981-82 recession began in July 1981 and ended in November 1982.

SEASONAL ADJUSTMENT

To correlate changes in a time series and changes in the business cycle it is desirable

SEASONAL ADJUSTMENT (continued)

to eliminate, insofar as possible, the effect of irrelevant factors from the data comprising the series. All series currently published in Indicators have been adjusted to minimize regular seasonal fluctuations in the data in order to show only activity related to the business cycle.

MONTHS FOR CYCLICAL DOMINANCE (MCD)

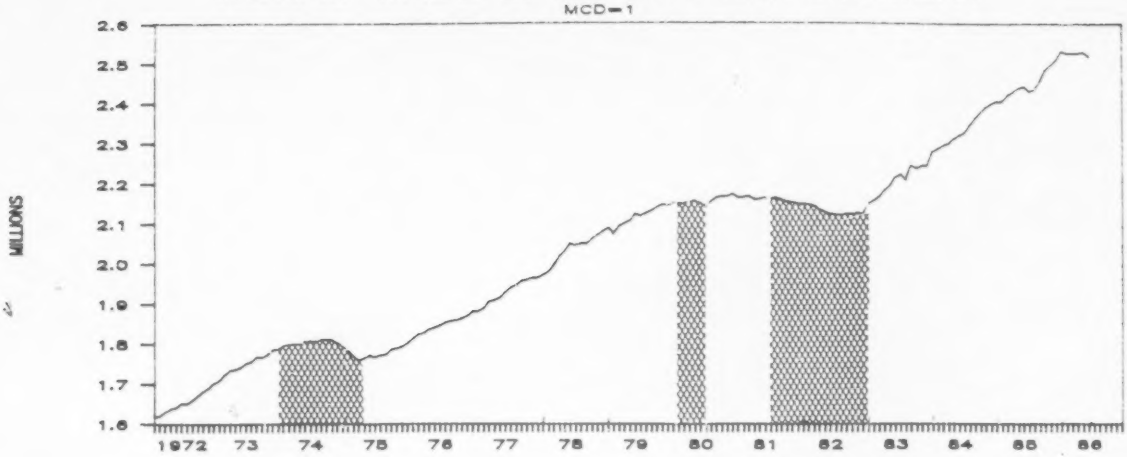
After seasonal adjustment there often remains a significant degree of purely random change, the effect of which can be minimized with a moving average equal in length to the MCD of the series. The MCD is an estimate of the length of the moving average which will reveal the cyclical pattern among the welter of random fluctuations in the data--the greater the MCD the more random and less cyclically significant are monthly changes in the series. Where noted, charts of historical data in this publication represent seasonally adjusted figures which have been averaged according to the MCD of each series.

DATA SOURCES

Nonagricultural Wage and Salary Employment	Virginia Employment Commission (VEC)
Manufacturing Employment	VEC
Total Unemployment Rate	VEC
Average Weekly initial Claims	VEC
Insured Unemployment Rate	VEC
Unemployment Insurance Final Payments	VEC
Average Manhours	VEC
Average Hourly Earnings	VEC
Average Weekly Earnings	VEC
Average Workweek	VEC
New Business Incorporations	Virginia State Corporation Commission
Valuation of Building Permits - 18 Cities	Local Building Inspectors
New Vehicle Registrations	Virginia State Division of Motor Vehicles
Electrical Power Sales	VEPCO, Appalachian Power Co., Delmarva Electric Co., Tennessee Power Company
Taxable Retail Sales	Virginia State Department of Taxation
Taxable Retail Sales/CPI	Virginia State Department of Taxation

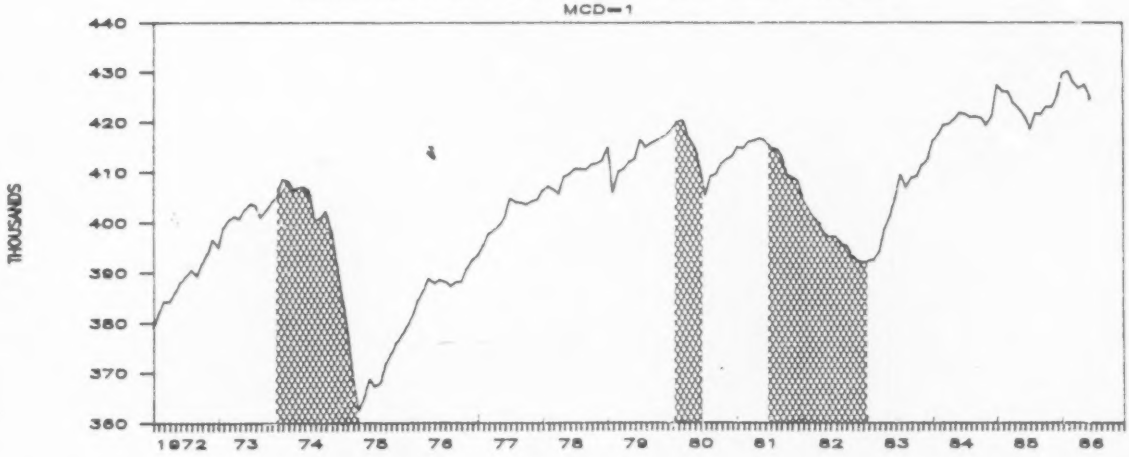
NONAG WAGE & SALARY EMPLOYMENT

MCD=1



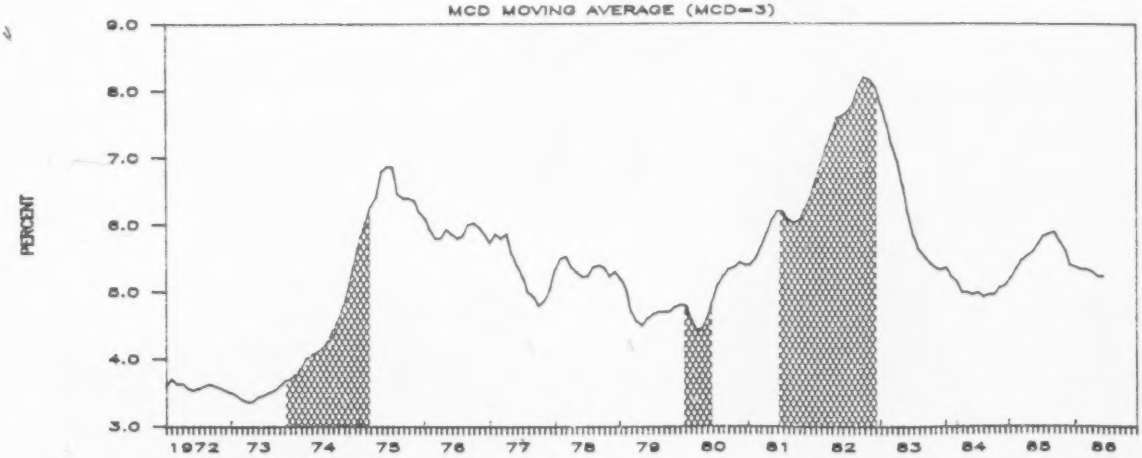
MANUFACTURING EMPLOYMENT

MCD=1



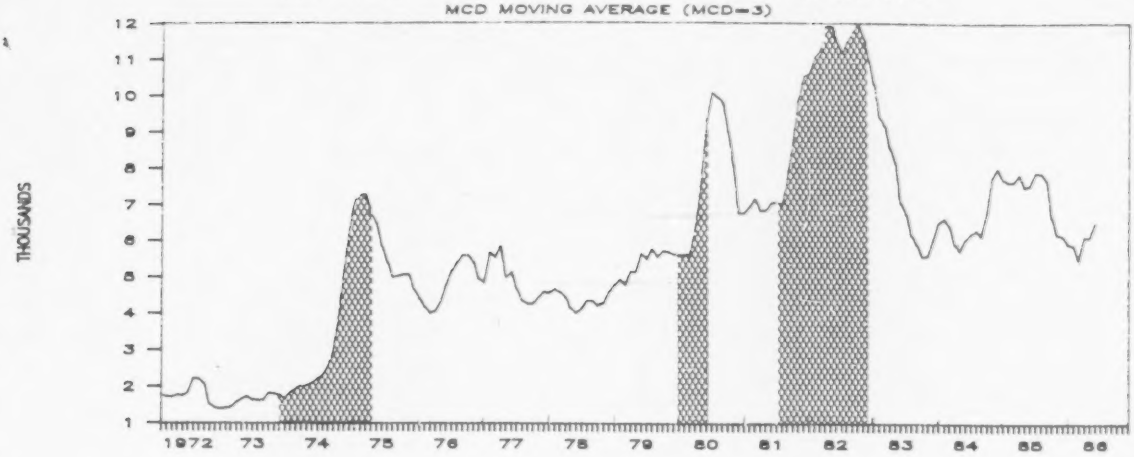
TOTAL UNEMPLOYMENT RATE

MCD MOVING AVERAGE (MCD=3)



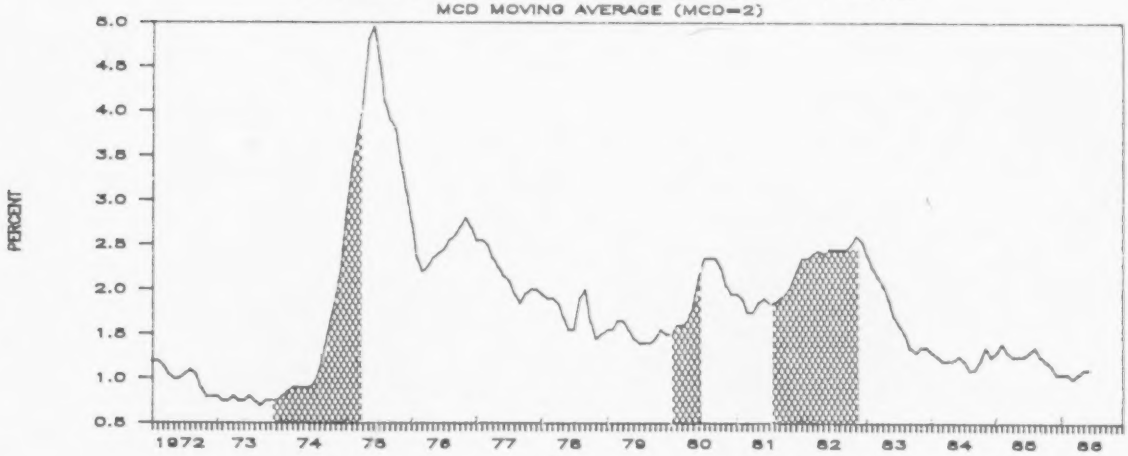
AVERAGE WEEKLY INITIAL CLAIMS

MCD MOVING AVERAGE (MCD=3)



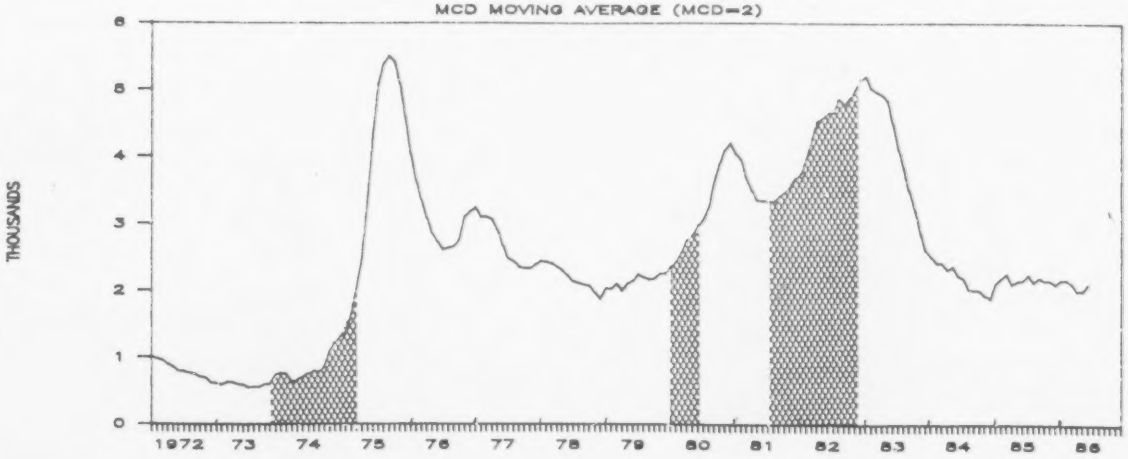
INSURED UNEMPLOYMENT RATE

MCD MOVING AVERAGE (MCD=2)



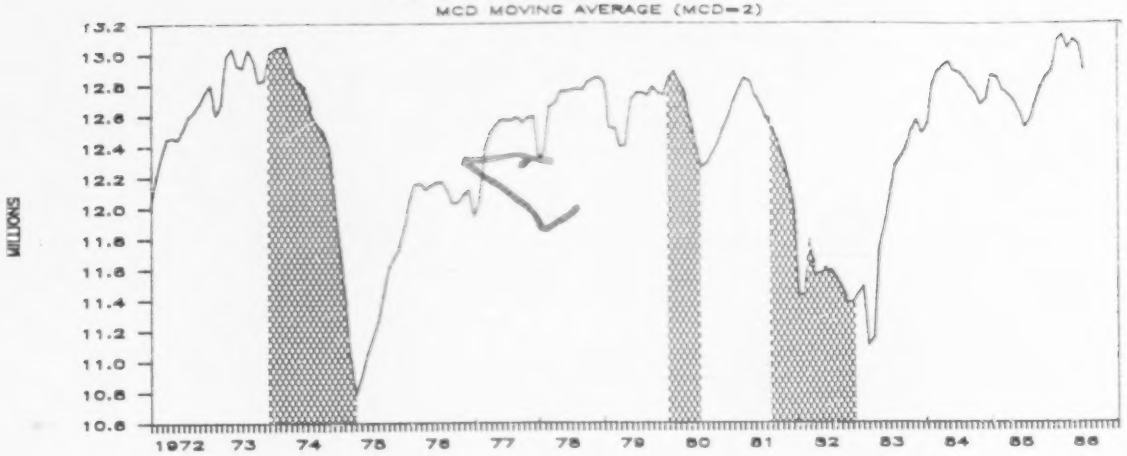
U. I. FINAL PAYMENTS

MCD MOVING AVERAGE (MCD=2)



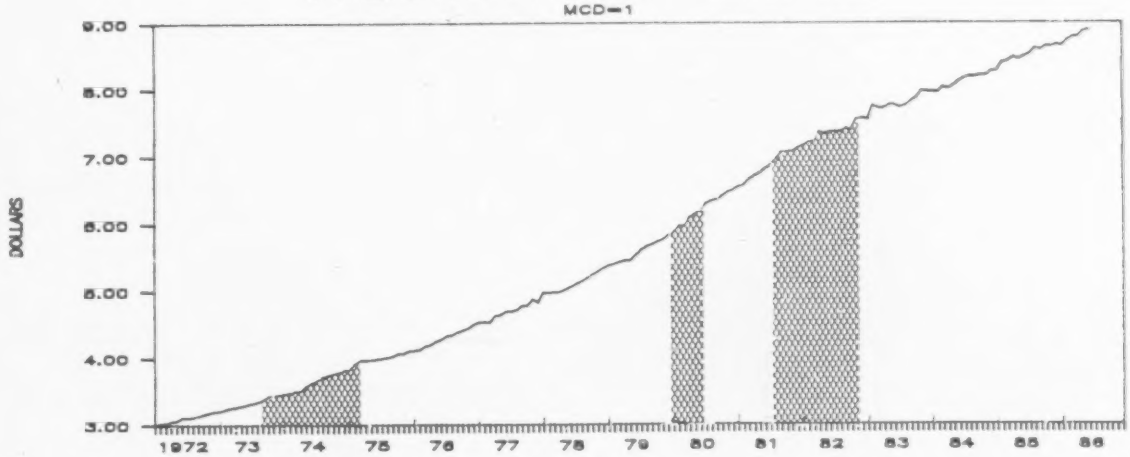
AVERAGE MANHOURS

MCD MOVING AVERAGE (MCD=2)



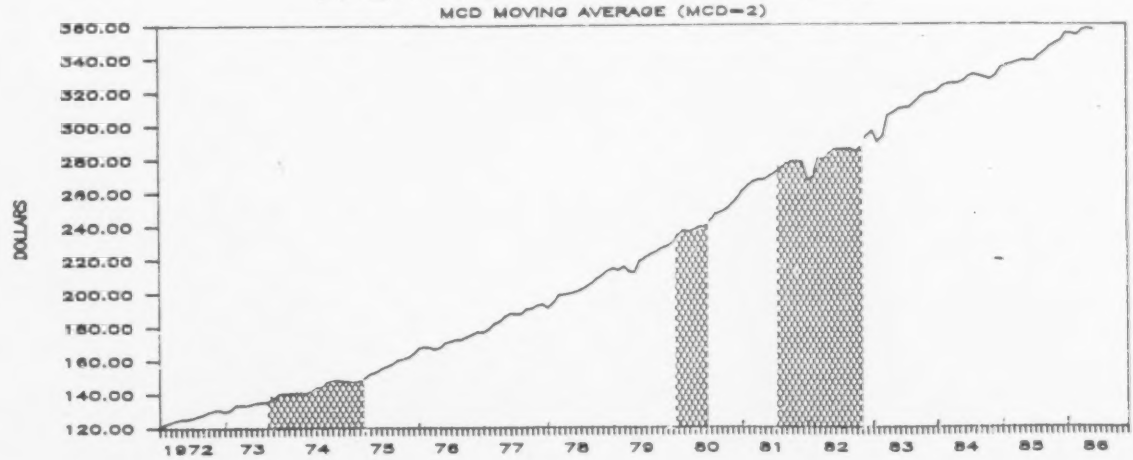
AVERAGE HOURLY EARNINGS

MCD=1



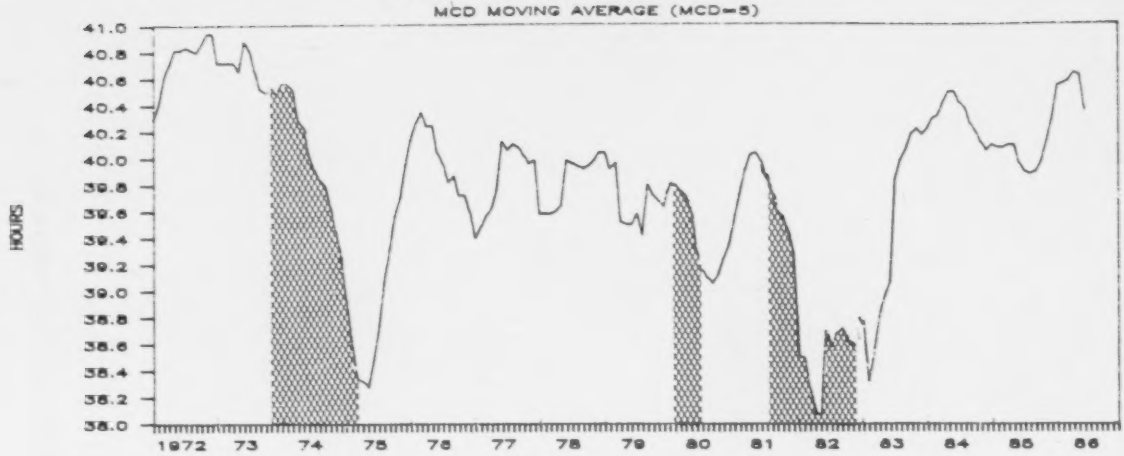
AVERAGE WEEKLY EARNINGS

MCD MOVING AVERAGE (MCD=2)



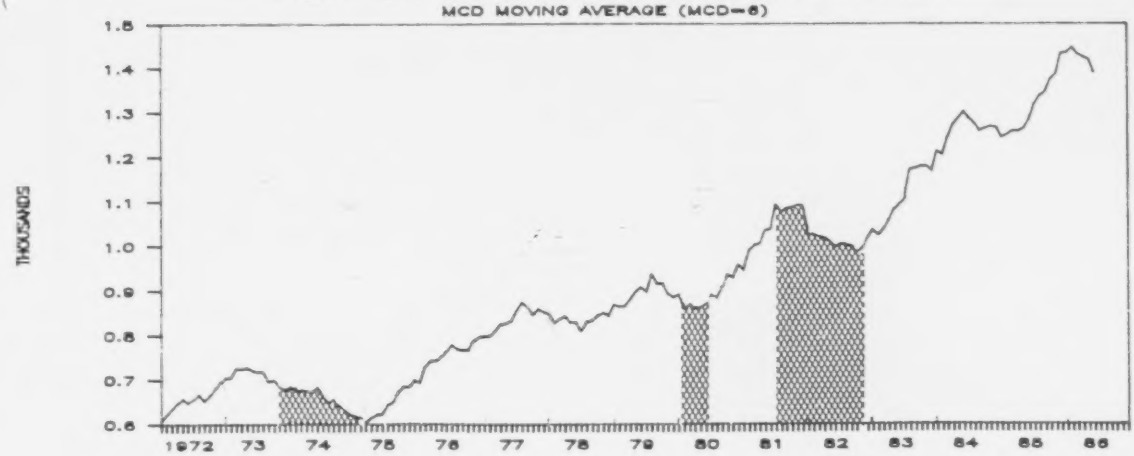
AVERAGE WORKWEEK

MCD MOVING AVERAGE (MCD=5)



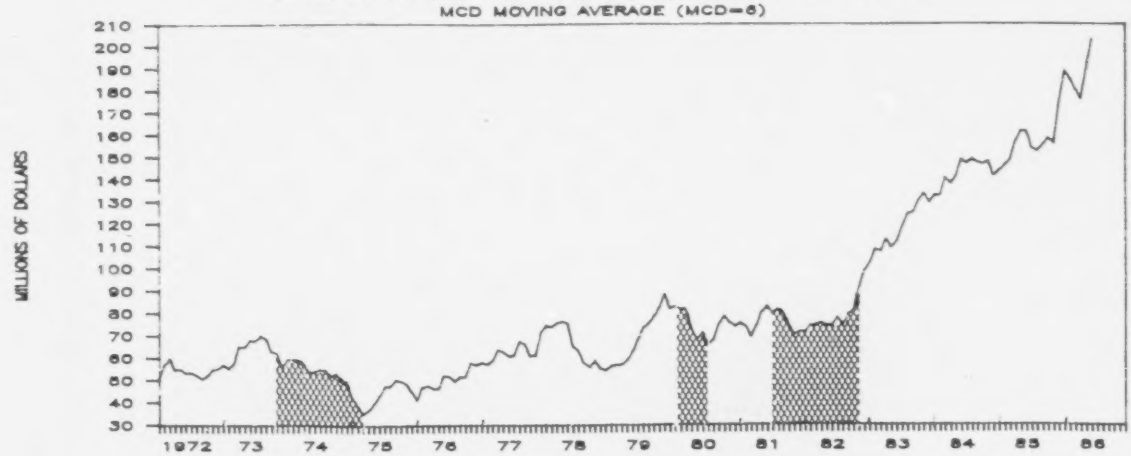
NEW BUSINESS INCORPORATIONS

MCD MOVING AVERAGE (MCD=6)



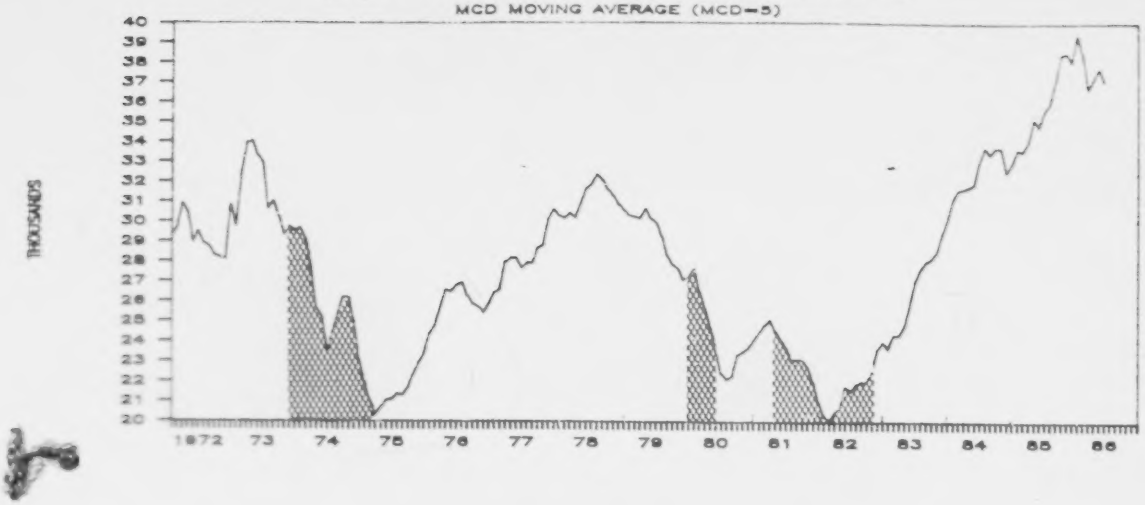
VALUATION OF BUILDING PERMITS

MCD MOVING AVERAGE (MCD=6)



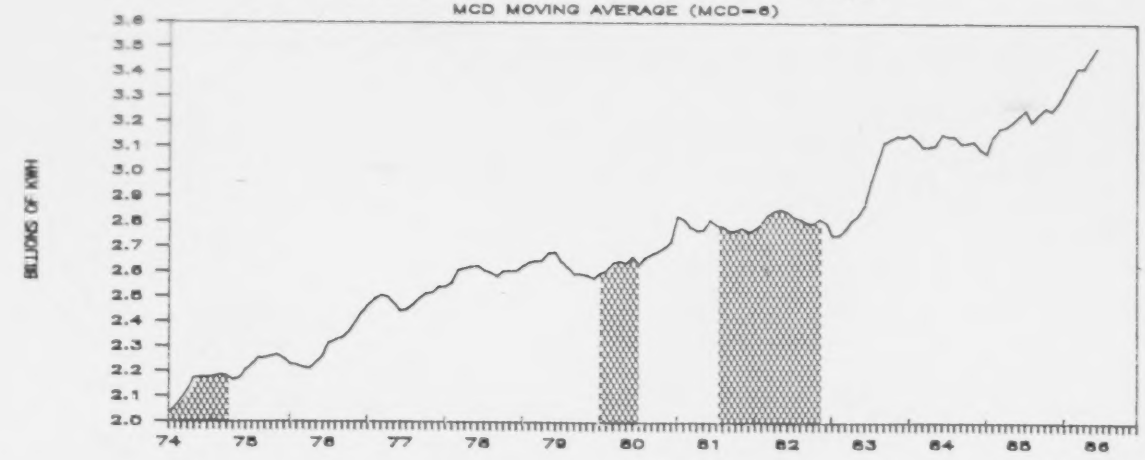
NEW VEHICLE REGISTRATIONS

MCD MOVING AVERAGE (MCD=5)



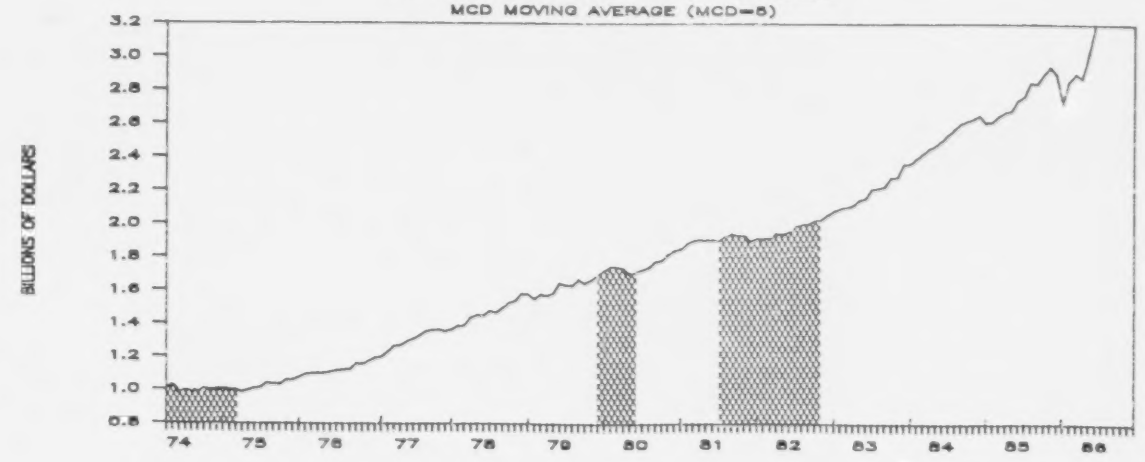
ELECTRICAL POWER SALES

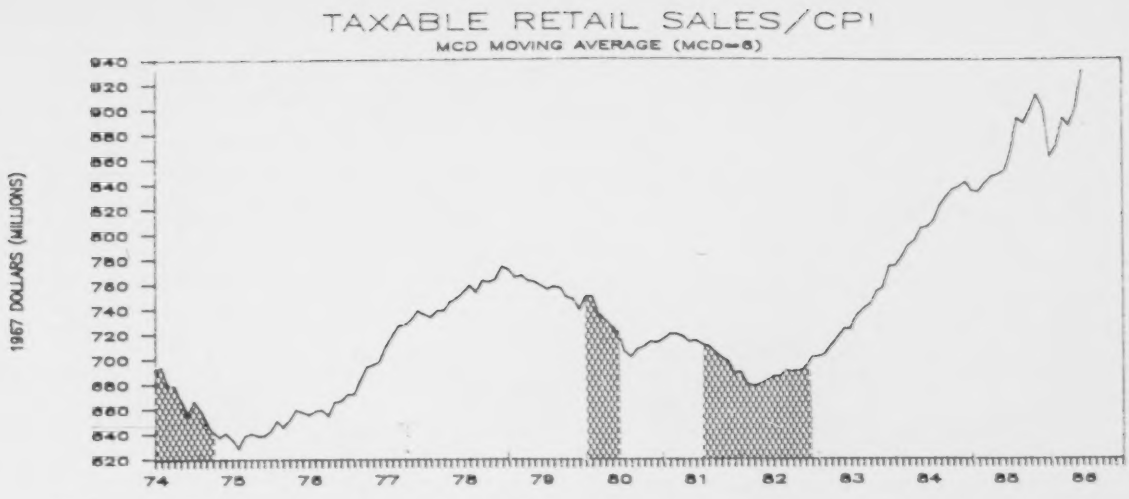
MCD MOVING AVERAGE (MCD=5)



TAXABLE RETAIL SALES

MCD MOVING AVERAGE (MCD=5)




TAXABLE RETAIL SALES/CPI
MCD MOVING AVERAGE (MCD=6)
1967 DOLLARS (MILLIONS)
940
920
900
880
860
840
820
800
780
760
740
720
700
680
660
640
620
74
75
76
77
78
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